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Ser Ser Val Ile His Leu Lys Pro Glu Glu Glu Asn Tyr Arg Glu Glu		95
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Gly Asp Pro Arg Thr Arg Ala Ser Asp Pro Gln Ser Pro Pro Gln Val		110
	115	120
Ser Arg His Lys Ser His Tyr Arg Asn Arg Glu His Phe Ala Thr Ile		125
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Arg Thr Ala Ser Leu Val Thr Arg Gln Met Gln Glu His Glu Gln Asp		140
145	150	155
Ser Glu Leu Arg Glu Gln Met Ser Gly Tyr Lys Arg Met Arg Arg Gln		160
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His Gln Lys Gln Leu Met Thr Leu Glu Asn Lys Leu Lys Ala Glu Met		175
	180	185
Asp Glu His Arg Leu Arg Leu Asp Lys Asp Leu Glu Thr Gln Arg Asn		190
	195	200
Asn Phe Ala Ala Glu Met Glu Lys Leu Ile Lys Lys His Gln Ala Ala		205
	210	215
Met Glu Lys Glu Ala Lys Val Met Ser Asn Glu Glu Lys Lys Phe Gln		220
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Gln His Ile Gln Ala Gln Gln Lys Lys Glu Leu Asn Ser Phe Leu Glu		240
	245	250
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&lt;210&gt; 4305

&lt;211&gt; 3400

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4305

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&lt;210&gt; 4306

&lt;211&gt; 1052

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4306

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Thr	Leu	Thr	Ala	Ala	Gly	Ala	Cys	Pro	Gly	Ala	Gly	Ala	Asp	Ala	Leu
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Glu	Ser	Pro	Ala	Ser	Pro	Gln	Leu	Val	Leu	Pro	Ala	Asn	Leu	Gly	Asp
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Gly	Leu	Gly	Ser	Ala	Leu	Gly	Ser	Leu	Arg	Val	Leu	Val	Leu	Arg	Arg
				85					90					95	
Asn	Arg	Phe	Ala	Arg	Leu	Pro	Pro	Ala	Val	Ala	Glu	Leu	Gly	His	His
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Leu	Thr	Glu	Leu	Asp	Val	Ser	His	Asn	Arg	Leu	Thr	Ala	Leu	Gly	Ala
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Glu	Val	Val	Ser	Ala	Leu	Arg	Glu	Leu	Arg	Lys	Leu	Asn	Leu	Ser	His
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Asn	Gln	Leu	Pro	Ala	Leu	Pro	Ala	Gln	Leu	Gly	Ala	Leu	Ala	His	Leu
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Glu	Glu	Leu	Asp	Val	Ser	Phe	Asn	Arg	Leu	Ala	His	Leu	Pro	Asp	Ser
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Leu	Ser	Cys	Leu	Ser	Arg	Leu	Arg	Thr	Leu	Asp	Val	Asp	His	Asn	Gln
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Leu	Asp	Asn	Asn	Gly	Leu	Gln	Ala	Leu	Pro	Ala	Gln	Phe	Ser	Cys	Leu
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Gln	Arg	Leu	Lys	Met	Leu	Asn	Leu	Ser	Ser	Asn	Leu	Phe	Glu	Glu	Phe
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Pro	Ala	Ala	Leu	Leu	Pro	Leu	Ala	Gly	Leu	Glu	Glu	Leu	Tyr	Leu	Ser
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Arg	Asn	Gln	Leu	Thr	Ser	Val	Pro	Ser	Leu	Ile	Ser	Gly	Leu	Gly	Arg
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Leu	Leu	Thr	Leu	Trp	Leu	Asp	Asn	Asn	Arg	Ile	Arg	Tyr	Leu	Pro	Asp
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Ser	Ile	Val	Glu	Leu	Thr	Gly	Leu	Glu	Glu	Leu	Val	Leu	Gln	Gly	Asn
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Gln	Ile	Ala	Val	Leu	Pro	Asp	His	Phe	Gly	Gln	Leu	Ser	Arg	Val	Gly
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Leu	Trp	Lys	Ile	Lys	Asp	Asn	Pro	Leu	Ile	Gln	Pro	Pro	Tyr	Glu	Val
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Cys	Met	Lys	Gly	Ile	Pro	Tyr	Ile	Ala	Ala	Tyr	Gln	Lys	Glu	Leu	Ala
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His	Ser	Gln	Pro	Ala	Val	Gln	Pro	Arg	Leu	Lys	Leu	Leu	Leu	Met	Gly
			405					410					415		
His	Lys	Ala	Ala	Gly	Lys	Thr	Leu	Leu	Arg	His	Cys	Leu	Thr	Glu	Glu
		420						425					430		
Arg	Val	Glu	Gly	Cys	Pro	Gly	Gly	Gly	Asp	Lys	Glu	Lys	Cys	Tyr	Pro
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Pro	Ser	Pro	Pro	Pro	Val	Ser	Lys	Gly	Ile	Glu	Val	Thr	Ser	Trp	Thr
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Ala	Asp	Ala	Ser	Arg	Gly	Leu	Arg	Phe	Ile	Val	Tyr	Asp	Leu	Ala	Gly
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Asp	Glu	Ser	Tyr	Glu	Val	Ile	Gln	Pro	Phe	Phe	Leu	Ser	Pro	Gly	Ala
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Leu	Tyr	Val	Leu	Val	Val	Asn	Leu	Ala	Thr	Tyr	Glu	Pro	Arg	His	Phe

3505

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Pro Leu Val Glu Glu Leu Asn Val Leu Leu Gln Glu Trp Pro Gly Leu				
	965		970	975
His Tyr Thr Val His Ile Leu Cys Ser Lys Cys Leu Lys Arg Gly Ser				
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Pro Asn Pro His Ala Phe Pro Gly Glu Leu Leu Ser Gln Pro Arg Pro				
	995		1000	1005
Glu Gly Val Ala Glu Ile Ile Cys Pro Lys Asn Gly Ser Glu Arg Val				
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Asn Val Ala Leu Val Tyr Pro Pro Thr Pro Thr Val Ile Ser Pro Cys				
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Ser Lys Lys Asn Val Gly Glu Lys His Arg Asn Gln				1040
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&lt;210&gt; 4307

&lt;211&gt; 947

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4307

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 50 55 60  
 Ser Cys Ser Cys Cys His Ala Ser Leu Cys Pro Ala Gly Gly Cys Gly  
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 85 90 95  
 Cys Gly Asp Cys Glu Gly Phe Asp Val His Ile Met Asp Asp Met Ile  
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 145 150 155 160  
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1928

&lt;210&gt; 4310

10/043,649  
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<211> 599  
<212> PRT  
<213> Homo sapiens

<400> 4310  
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35 40 45  
Lys Asn His Met Ala Val His Tyr Asn Lys Ile Leu Ser Ala Lys Ala  
50 55 60  
Ala Val Asp Cys Ser Val Pro Val Ser Val Ser Thr Ser Ile Lys Tyr  
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Ala Asp Gln Gln Arg Arg Glu Lys Leu Lys Lys Glu Leu Ala Gln Cys  
85 90 95  
Glu Lys Glu Phe Lys Leu Thr Lys Thr Ala Met Arg Ala Asn Tyr Lys  
100 105 110  
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130 135 140  
Ser Phe Ala Arg Ser Leu Val Pro Ser Ser Glu Arg Leu His Leu Ser  
145 150 155 160  
Leu His Lys Ser Ser Lys Val Ile Thr Asn Gly Pro Glu Lys Asn Ser  
165 170 175  
Ser Ser Ser Pro Ser Ser Val Asp Tyr Ala Ala Ser Gly Pro Arg Lys  
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195 200 205  
Asn Ser His Arg Phe Gln Leu Val Ile Ser Lys Ala Pro Ser Gly Asp  
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225 230 235 240  
Thr Pro Arg Thr Leu Lys Thr Glu Ala Lys Ser Phe Leu Ser Gln Tyr  
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Arg Tyr Tyr Thr Pro Ala Lys Arg Lys Lys Asp Phe Thr Asp Gln Arg  
260 265 270  
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290 295 300  
Ala Ser Asn Cys Val Thr Tyr Asp Ala Lys Glu Lys Ile Ala Pro Leu  
305 310 315 320  
Pro Leu Glu Gly His Asp Ser Thr Trp Asp Glu Ile Lys Asp Asp Ala  
325 330 335  
Leu Gln His Ser Ser Pro Arg Ala Met Cys Gln Tyr Ser Leu Lys Pro  
340 345 350  
Pro Ser Thr Arg Lys Ile Tyr Ser Asp Glu Glu Glu Leu Leu Tyr Leu  
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Ser Phe Ile Glu Asp Val Thr Asp Glu Ile Leu Lys Leu Gly Leu Phe  
370 375 380  
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Ser Asp Pro Glu Lys Val Glu Ile Ser Asn Gly Leu Cys Gly Leu Asn
545          550          555          560
Thr Ser Pro Ser Gln Ser Val Gln Phe Ser Ser Val Lys Gly Asp Asn
          565          570          575
Asn His Asp Met Glu Leu Ser Thr Leu Lys Ile Met Glu Met Ser Ile
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Glu Asp Cys Pro Leu Asp Val
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<210> 4311
<211> 432
<212> DNA
<213> Homo sapiens

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<400> 4311
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240
gccgatgagg gagatgggaa aagtaacgac ctgctcctta gttgtcctta ctttagaaat
300
gagactggag gggaaggcga caggcggatt gcgctctctc gagccaactc atcctcttct
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432

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<210> 4312
<211> 144
<212> PRT

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&lt;213&gt; Homo sapiens

&lt;400&gt; 4312

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 1 5 10 15  
 His Tyr Asp Val Gln Ser Ile Leu Phe Asn Ile Asn Glu Ala Met Ala  
 20 25 30  
 Thr Arg Ala Asn Val Gly Lys Arg Lys Asn Ile Thr Thr Gly Ala Ser  
 35 40 45  
 Ala Ala Ser Gln Thr Gln Met Pro Thr Gly Gln Thr Gly Asn Cys Glu  
 50 55 60  
 Ser Pro Leu Gly Ser Lys Glu Asp Leu Asn Ser Lys Glu Asn Leu Asp  
 65 70 75 80  
 Ala Asp Glu Gly Asp Gly Lys Ser Asn Asp Leu Val Leu Ser Cys Pro  
 85 90 95  
 Tyr Phe Arg Asn Glu Thr Gly Gly Glu Gly Asp Arg Arg Ile Ala Leu  
 100 105 110  
 Ser Arg Ala Asn Ser Ser Ser Phe Ser Ser Gly Glu Ser Cys Ser Phe  
 115 120 125  
 Glu Ser Ser Leu Ser Ser His Cys Thr Asn Ala Gly Val Ser Val Leu  
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&lt;210&gt; 4313

&lt;211&gt; 936

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4313

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 240  
 atttgcagtt tgcaaaatat acagacccaa gtcctgaggg gactgaggac atgatgctgg  
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 420  
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 780

gtttacttct ctgcacgggg gactcacccc aagaccattt ccagcagctt cccaggtgat  
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936

<210> 4314  
<211> 110  
<212> PRT  
<213> Homo sapiens

<400> 4314  
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1 5 10 15  
Thr Arg Met Ala Leu Trp Ser Leu Glu His Pro Ser Cys Cys Arg Val  
20 25 30  
Leu Gln Pro His Pro Phe Ser Thr Gly Pro Trp Tyr Pro Gly Ser Ser  
35 40 45  
Leu Ser Ser Ala Thr Asp Leu Cys Ala Leu Val Tyr Phe Ser Ala Arg  
50 55 60  
Gly Thr His Pro Lys Thr Ile Ser Ser Ser Phe Pro Gly Asp Val Val  
65 70 75 80  
Pro Gln Gly Trp Ala Leu Gln Leu Trp Pro Ser Ser Leu Val Leu Pro  
85 90 95  
Arg Arg His Gln Ala Ala Gln Asn Glu Val Thr Ala Gly Asn  
100 105 110

<210> 4315  
<211> 573  
<212> DNA  
<213> Homo sapiens

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120  
cacctaccat ccaagccatg gtcaccttca ccaagccaca gtcattctacc atccaagcca  
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ccgtcaccta ccatccaagc catggccacc tacctgccaa gccatggcca cctacccgcc  
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420  
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480  
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573

<210> 4316  
 <211> 169  
 <212> PRT  
 <213> Homo sapiens

<400> 4316  
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 His Arg Gln Ala Gln Ser Asp Asp His Val Lys Thr Gln Gly Arg Asp  
 20 25 30  
 Gly His Leu Pro Pro Arg His Gly His Leu Pro Ser Lys Pro Trp Ser  
 35 40 45  
 Pro Ser Pro Ser His Ser His Leu Pro Ser Lys Pro Pro Ser Pro Thr  
 50 55 60  
 Ile Gln Ala Met Ala Thr Tyr Leu Pro Ser His Gly His Leu Pro Ala  
 65 70 75 80  
 Lys Pro Trp Ser Pro Thr His Gln Val Met Val Ala Tyr His Pro Arg  
 85 90 95  
 Ser Arg Pro Gly Thr Asp Pro Ser Pro Glu Pro Ser Val Gly Ala Asn  
 100 105 110  
 Pro Ala Asp Thr Leu Ile Ser Asp Phe Lys Pro Pro Glu Leu Trp Asp  
 115 120 125  
 Asn Pro Ser Leu Ser Phe Asn Pro Pro Ser Met Trp Ser Leu Val Thr  
 130 135 140  
 Val Ala Leu Ala Ser Glu Pro Thr Arg Ala Leu Leu Gln Ser Pro Gly  
 145 150 155 160  
 Ser Gly Val Val Leu Val Arg Lys Phe  
 165

<210> 4317  
 <211> 744  
 <212> DNA  
 <213> Homo sapiens

<400> 4317  
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 180  
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 360  
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 420  
 aattgcttag gaatccagcg ctttgcctgat acccattcac tcaaaacact cttcacaaaa  
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 tgcaaaaatt ttgcgttaca gacttttgag gatgtatccc agcacgaaga atttcttgag  
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cttgacaaag atgaacttat tgattatatt tgtagtgatg aacttggttat tggtaaagag  
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 720  
 caaacagttg aagtggacca attg  
 744

<210> 4318  
 <211> 239  
 <212> PRT  
 <213> Homo sapiens

<400> 4318  
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 Ile Leu Gln Ile Phe Asn Glu Phe Arg Asp Ser Arg Leu Phe Thr Asp  
 20 25 30  
 Val Ile Ile Trp Val Glu Gly Lys Glu Phe Pro Cys His Arg Ala Val  
 35 40 45  
 Leu Ser Ala Cys Ser Ser Tyr Phe Arg Ala Met Phe Cys Asn Asp His  
 50 55 60  
 Arg Glu Ser Arg Glu Met Leu Val Glu Ile Asn Gly Ile Leu Ala Glu  
 65 70 75 80  
 Ala Met Glu Cys Phe Leu Gln Tyr Val Tyr Thr Gly Lys Val Lys Ile  
 85 90 95  
 Thr Thr Glu Asn Val Gln Tyr Leu Phe Glu Thr Ser Ser Leu Phe Gln  
 100 105 110  
 Ile Ser Val Leu Arg Asp Ala Cys Ala Lys Phe Leu Glu Glu Gln Leu  
 115 120 125  
 Asp Pro Cys Asn Cys Leu Gly Ile Gln Arg Phe Ala Asp Thr His Ser  
 130 135 140  
 Leu Lys Thr Leu Phe Thr Lys Cys Lys Asn Phe Ala Leu Gln Thr Phe  
 145 150 155 160  
 Glu Asp Val Ser Gln His Glu Glu Phe Leu Glu Leu Asp Lys Asp Glu  
 165 170 175  
 Leu Ile Asp Tyr Ile Cys Ser Asp Glu Leu Val Ile Gly Lys Glu Glu  
 180 185 190  
 Met Val Phe Glu Ala Val Met Arg Trp Val Tyr Arg Ala Val Asp Leu  
 195 200 205  
 Arg Arg Pro Leu Leu His Glu Leu Leu Thr His Val Arg Leu Pro Leu  
 210 215 220  
 Leu His Pro Asn Tyr Phe Val Gln Thr Val Glu Val Asp Gln Leu  
 225 230 235

<210> 4319  
 <211> 388  
 <212> DNA  
 <213> Homo sapiens

<400> 4319  
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ccaggccgta gccacagcaa ggaccgaacc ctgggaaaac cagacagcct tttagtgcct  
 120  
 gcagtcgcaa gtgactcttg caataatagc atctcactcc tatctgaaaa gttgacaagc  
 180  
 agctgttccc cccatcatat caagagaagt gtagtggaag ctatgcaacg ccaagctcgg  
 240  
 aaaatgtgca attacgacaa aatcttggcc acaaagaaaa acctagacca tgtcaataaa  
 300  
 atcttaaaag ccaaaaaact tcaaaggcag gccaggacag ggaataactt tgtgaaacgt  
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 388

<210> 4320  
 <211> 129  
 <212> PRT  
 <213> Homo sapiens

<400> 4320  
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 1 5 10 15  
 Pro Ser Ser Ser Pro Gly Arg Ser His Ser Lys Asp Arg Thr Leu Gly  
 20 25 30  
 Lys Pro Asp Ser Leu Leu Val Pro Ala Val Ala Ser Asp Ser Cys Asn  
 35 40 45  
 Asn Ser Ile Ser Leu Leu Ser Glu Lys Leu Thr Ser Ser Cys Ser Pro  
 50 55 60  
 His His Ile Lys Arg Ser Val Val Glu Ala Met Gln Arg Gln Ala Arg  
 65 70 75 80  
 Lys Met Cys Asn Tyr Asp Lys Ile Leu Ala Thr Lys Lys Asn Leu Asp  
 85 90 95  
 His Val Asn Lys Ile Leu Lys Ala Lys Lys Leu Gln Arg Gln Ala Arg  
 100 105 110  
 Thr Gly Asn Asn Phe Val Lys Arg Arg Pro Gly Arg Pro Arg Ser Glu  
 115 120 125  
 Arg

<210> 4321  
 <211> 278  
 <212> DNA  
 <213> Homo sapiens

<400> 4321  
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 180  
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 278

<210> 4322  
 <211> 85  
 <212> PRT  
 <213> Homo sapiens

<400> 4322  
 Met Gly Ala Gly Gly His Lys Thr Ser Ala Gln Leu Thr Pro Ala Pro  
 1 5 10 15  
 His Val Leu Ile Cys Ser Pro Asp Leu Gly Leu Pro Ser Glu Pro Leu  
 20 25 30  
 Asn Ala Trp Val Pro Pro Arg Ala Ala Phe His Arg Asp Ala Gly Pro  
 35 40 45  
 Ala Val Ala Gly Pro Cys Arg Cys Gly Gly Leu Leu Thr Lys Glu Pro  
 50 55 60  
 Gly Leu Ala Ala Trp Asn Asn Leu Gln Val Gly Val Leu Arg Gly Leu  
 65 70 75 80  
 Trp Gln Val Leu Gly  
 85

<210> 4323  
 <211> 1542  
 <212> DNA  
 <213> Homo sapiens

<400> 4323  
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 gacgagaaga ttgagggtgga tgacccccct gacaaggagg acatgcgatc aagcttcagg  
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 240  
 ggggaaaact ccagcaaaac tggactctct acgtcaggca atgtggagaa aaacaaagct  
 300  
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 420  
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ttgccagaag tggatcttga ctctggaaag aaaccttccg agcagacagc gtccggtcatg  
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 aaacaggtca caatcaagcc tgtggctact gctttcctcc cagtgtctgc tgtgaagacg  
 1080  
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 1320  
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&lt;210&gt; 4324

&lt;211&gt; 514

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4324

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		20						25					30		
Ser	Ser	Ala	Glu	Glu	Phe	Asp	Asp	Asp	Glu	Lys	Ile	Glu	Val	Asp	Asp
		35					40					45			
Pro	Pro	Asp	Lys	Glu	Asp	Met	Arg	Ser	Ser	Phe	Arg	Ser	Asn	Val	Leu
	50					55					60				
Thr	Gly	Ser	Ala	Pro	Gln	Gln	Asp	Tyr	Asp	Lys	Leu	Lys	Ala	Leu	Gly
65					70					75				80	
Gly	Glu	Asn	Ser	Ser	Lys	Thr	Gly	Leu	Ser	Thr	Ser	Gly	Asn	Val	Glu
			85						90					95	
Lys	Asn	Lys	Ala	Val	Lys	Arg	Glu	Thr	Glu	Ala	Ser	Ser	Ile	Asn	Leu
			100					105					110		
Ser	Val	Tyr	Glu	Pro	Phe	Lys	Val	Arg	Lys	Ala	Glu	Asp	Lys	Leu	Lys
		115						120				125			
Glu	Ser	Ser	Asp	Lys	Val	Leu	Glu	Asn	Arg	Val	Leu	Asp	Gly	Lys	Leu
		130				135					140				
Ser	Ser	Glu	Lys	Asn	Asp	Thr	Ser	Leu	Pro	Ser	Val	Ala	Pro	Ser	Lys
145					150					155				160	
Thr	Lys	Ser	Ser	Ser	Lys	Leu	Ser	Ser	Cys	Ile	Ala	Ala	Ile	Ala	Ala
			165						170					175	
Leu	Ser	Ala	Lys	Lys	Ala	Ala	Ser	Asp	Ser	Cys	Lys	Glu	Pro	Val	Ala

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240  
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1405

&lt;210&gt; 4326

&lt;211&gt; 336

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4326

Met	Phe	Phe	Leu	Pro	Gln	Val	Leu	Leu	Ala	Trp	Ser	Gly	Gly	Pro	Ser
1				5					10					15	
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<210> 4327
<211> 551
<212> DNA
<213> Homo sapiens
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120
tgtgcaggtg gggaaattta gaccctgaaa aagggatgcc ctgagatcac catgagattg
180
aggggcaagc agggctcacc ctgactggct cacttcccag gcacccccat gagcccaggc
240
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<210> 4328  
 <211> 107  
 <212> PRT  
 <213> Homo sapiens

<400> 4328  
 Met Pro Ser Arg Val Gln Ala Pro Ser Trp Gln Ala Arg Ala Val Gly  
 1 5 10 15  
 Val Thr Leu Leu Ser Gln Arg Trp Val Cys Pro Ile Val Val Ser Arg  
 20 25 30  
 Ala Thr Ser Ser Pro Trp Leu Cys Gly Leu Ser Val Ser His Pro Gln  
 35 40 45  
 His Leu Asp Gly Leu Arg Val Arg Ala Lys Val Arg Arg Pro Gly His  
 50 55 60  
 His Thr Ile Pro Ala Thr Thr Arg Trp Leu Phe Leu Glu Ser Glu Gly  
 65 70 75 80  
 Gly Arg Arg Cys Leu Gly Ser Trp Gly Cys Leu Gly Ser Glu Pro Val  
 85 90 95  
 Arg Val Ser Pro Ala Cys Pro Ser Ile Ser Trp  
 100 105

<210> 4329  
 <211> 3192  
 <212> DNA  
 <213> Homo sapiens

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 240  
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 300  
 agatctagcc agcgagatca gatactctat ctctttggga gaactggccg agaaaaagag  
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 420

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480  
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 <211> 371  
 <212> PRT  
 <213> Homo sapiens

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 Ser Arg Ser Pro Gln Arg Ser Pro Leu Gln Ser Ala Glu Ser Ser Pro  
 35 40 45  
 Thr Ala Gly Lys Lys Leu Pro Glu Val Pro Pro Ser Glu Glu Glu Glu



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Gln Glu Ala Trp Val	Asn Ala Leu Leu Gly Arg	Ile Phe Trp Asp Phe		
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Leu Gly Glu Lys Tyr	Trp Ser Asp Leu Val Ser	Lys Lys Ile Gln Met		
	85	90	95	
Lys Leu Ser Lys Ile	Lys Leu Pro Tyr Phe	Met Asn Glu Leu Thr	Leu	
	100	105	110	
Thr Glu Leu Asp Met	Gly Val Ala Val Pro	Lys Ile Leu Gln Ala	Phe	
	115	120	125	
Lys Pro Tyr Val Asp	His Gln Gly Leu Trp	Ile Asp Leu Glu Met	Ser	
	130	135	140	
Tyr Asn Gly Ser Phe	Leu Met Thr Leu Glu	Thr Lys Met Asn Leu	Pro	
	145	150	155	160
Lys Leu Gly Lys Glu	Pro Leu Val Glu Ala	Leu Lys Val Gly Glu	Ile	
	165	170	175	
Gly Lys Glu Gly Cys	Arg Pro Arg Ala Phe	Cys Leu Ala Asp Ser	Asp	
	180	185	190	
Glu Glu Ser Ser Ser	Ala Gly Ser Ser Glu	Glu Glu Asp Asp Ala	Pro Glu	
	195	200	205	
Pro Ala Gly Glu Thr	Asn Ser Ser Ser Gln	Gly Glu Gly Tyr Val	Gly	
	210	215	220	
Gly His Arg Thr Ser	Lys Ile Met Arg Phe	Val Asp Lys Ile Thr	Lys	
	225	230	235	240
Ser Lys Tyr Phe Gln	Lys Ala Thr Glu Thr	Glu Phe Ile Lys Arg	Xaa	
	245	250	255	
Ile Glu Glu Val Ser	Asn Thr Pro Leu Leu	Leu Thr Val Glu Val	Gln	
	260	265	270	
Glu Cys Arg Gly Thr	Leu Ala Val Asn Ile	Pro Pro Pro Pro Thr	Asp	
	275	280	285	
Arg Val Trp Tyr Gly	Phe Arg Lys Pro Pro	His Val Glu Leu Lys	Ala	
	290	295	300	
Arg Pro Lys Leu Gly	Glu Arg Glu Val Thr	Leu Val His Val Thr	Asp	
	305	310	315	320
Trp Ile Glu Lys Lys	Leu Glu Gln Glu Phe	Gln Lys Val Phe Val	Met	
	325	330	335	
Pro Asn Met Asp Asp	Val Tyr Ile Thr Ile	Met His Ser Ala Met	Asp	
	340	345	350	
Pro Arg Ser Thr Ser	Cys Leu Leu Lys Asp	Pro Pro Val Glu Ala	Ala	
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Asp Arg Pro				
370				

&lt;210&gt; 4331

&lt;211&gt; 1355

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4331

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120

gatttaaagt agcctttgca cctcagtttc cttcagaatg ctgcaaaact atatgctaca  
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gtatatgtga ttccatttgc agaagaggac ttatcagcag atgccctctt gaatattctt  
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 300  
 gcaaggaaac cagaccatgt tcctattagc agtgaagatg agaggaatgc aattttccaa  
 360  
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 420  
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 480  
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 660  
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 720  
 aatggaatat catttacaat ttgggatcga tggaccgtac atggaaaaga agatttcacc  
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 840  
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 900  
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 960  
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 1080  
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 1355

&lt;210&gt; 4332

&lt;211&gt; 345

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4332

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Leu	Asp	Ile	Arg	Leu	Lys	Asp	Gly	Ser	Leu	Phe	Trp	Gln	Ser	Pro	Lys
			20					25					30		
Arg	Pro	Pro	Ser	Pro	Ile	Lys	Phe	Asp	Leu	Asn	Glu	Pro	Leu	His	Leu
		35					40					45			
Ser	Phe	Leu	Gln	Asn	Ala	Ala	Lys	Leu	Tyr	Ala	Thr	Val	Tyr	Cys	Ile

50	55	60
Pro Phe Ala Glu Glu Asp Leu Ser Ala Asp Ala Leu Leu Asn Ile Leu		
65	70	75
Ser Glu Val Lys Ile Gln Glu Phe Lys Pro Ser Asn Lys Val Val Gln		80
	85	90
Thr Asp Glu Thr Ala Arg Lys Pro Asp His Val Pro Ile Ser Ser Glu		95
	100	105
Asp Glu Arg Asn Ala Ile Phe Gln Leu Glu Lys Ala Ile Leu Ser Asn		110
	115	120
Glu Ala Thr Lys Ser Asp Leu Gln Met Ala Val Leu Ser Phe Glu Lys		125
	130	135
Asp Asp Asp His Asn Gly His Ile Asp Phe Ile Thr Ala Ala Ser Asn		140
	145	150
Leu Arg Ala Lys Met Tyr Ser Ile Glu Pro Ala Asp Arg Phe Lys Thr		155
	165	170
Lys Arg Ile Ala Gly Lys Ile Ile Pro Ala Ile Ala Thr Thr Thr Ala		175
	180	185
Thr Val Ser Gly Leu Val Ala Leu Glu Met Ile Lys Val Thr Gly Gly		190
	195	200
Tyr Pro Phe Glu Ala Tyr Lys Asn Cys Phe Leu Asn Leu Ala Ile Pro		205
	210	215
Ile Val Val Phe Thr Glu Thr Thr Glu Val Arg Lys Thr Lys Ile Arg		220
	225	230
Asn Gly Ile Ser Phe Thr Ile Trp Asp Arg Trp Thr Val His Gly Lys		235
	245	250
Glu Asp Phe Thr Leu Leu Asp Phe Ile Asn Ala Val Lys Glu Lys Tyr		255
	260	265
Gly Ile Glu Pro Thr Met Val Val Gln Gly Val Lys Met Leu Tyr Val		270
	275	280
Pro Val Met Pro Gly His Ala Lys Arg Leu Lys Leu Thr Met His Lys		285
	290	295
Leu Val Lys Pro Thr Thr Glu Lys Lys Tyr Val Asp Leu Thr Val Ser		300
	305	310
Phe Ala Pro Asp Ile Asp Gly Asp Glu Asp Leu Pro Gly Pro Pro Val		315
	325	330
Arg Tyr Tyr Phe Ser His Asp Thr Asp		335
	340	345

&lt;210&gt; 4333

&lt;211&gt; 1278

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4333

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gcctacttgg aagtgcacca gcaggagcaa gagaaactcc aggggcagat aaggaggtcc  
300

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&lt;210&gt; 4334

&lt;211&gt; 189

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4334

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Phe	Ala	Gly	Val	Leu	Gly	Ser	His	Glu	Arg	Gly	Pro	Arg	Ser	Phe	Pro
			20					25					30		
Val	Phe	Ser	Pro	Pro	Gly	Pro	Pro	Arg	Lys	Pro	Pro	Ala	Leu	Ser	Arg
		35					40					45			
Val	Ser	Arg	Met	Phe	Ser	Val	Ala	His	Pro	Ala	Ala	Lys	Val	Pro	Gln
	50					55					60				
Pro	Glu	Arg	Leu	Asp	Leu	Val	Tyr	Thr	Ala	Leu	Lys	Arg	Gly	Leu	Thr
65					70					75				80	
Ala	Tyr	Leu	Glu	Val	His	Gln	Gln	Glu	Gln	Glu	Lys	Leu	Gln	Gly	Gln
				85					90				95		
Ile	Arg	Glu	Ser	Lys	Arg	Asn	Ser	Arg	Leu	Gly	Phe	Leu	Tyr	Asp	Leu

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His Ala Ser Lys Ile Asp Glu Leu Tyr Glu Ala Tyr Cys Val Gln Arg
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Arg Leu Arg Asp Gly Ala Tyr Asn Met Val Arg Ala Tyr Thr Thr Gly
145      150      155      160
Ser Pro Gly Ser Arg Glu Ala Arg Asp Ser Leu Ala Glu Ala Thr Arg
      165      170      175
Gly His Arg Glu Tyr Thr Glu Val Gly Asp Gly Gly Pro
      180      185

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&lt;210&gt; 4335

&lt;211&gt; 1211

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4335

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1080

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 <212> PRT  
 <213> Homo sapiens

<400> 4336  
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 35 40 45  
 Leu Val Glu Val Val Ala Lys Tyr Thr Arg Asp His Val Gly Ser Phe  
 50 55 60  
 Met Thr Glu Ser Gln Asn Leu Ser Thr His Leu Leu Ile Leu Tyr Gly  
 65 70 75 80  
 Val Gln Gly Leu Leu Thr Phe Gly Tyr Leu Val Leu Leu Ser His Val  
 85 90 95  
 Gly Glu Arg Met Ala Val Asp Met Arg Arg Ala Leu Phe Ser Ser Leu  
 100 105 110  
 Leu Arg Gln Asp Ile Thr Phe Phe Asp Ala Asn Lys Thr Gly Gln Leu  
 115 120 125  
 Val Ser Arg Leu Thr Thr Asp Val Gln Glu Phe Lys Ser Ser Phe Lys  
 130 135 140  
 Leu Val Ile Ser Gln Gly Leu Arg Ser Cys Thr Gln Val Ala Gly Cys  
 145 150 155 160  
 Leu Val Ser Leu Ser Met Leu Ser Thr Arg Leu Thr Leu Leu Leu Met  
 165 170 175  
 Val Ala Thr Pro Ala Leu Met Gly Val Gly Thr Leu Met Gly Ser Gly  
 180 185 190  
 Leu Arg Lys Leu Ser Arg Gln Cys Gln Glu Gln Ile Ala Arg Ala Met  
 195 200 205  
 Gly Val Ala Asp Glu Ala Leu Gly Asn Val Arg Thr Val Arg Ala Phe  
 210 215 220  
 Ala Met Glu Gln Arg Glu Glu Glu Arg Tyr Gly Ala Glu Leu Glu Ala  
 225 230 235 240  
 Cys Arg Cys Arg Ala Glu Glu Leu Gly Arg Gly Ile Ala Leu Phe Gln  
 245 250 255  
 Gly Leu Ser Asn Ile Ala Phe Asn Cys Met Val Leu Gly Thr Leu Phe  
 260 265 270  
 Ile Gly Gly Ser Leu Val Ala Gly Gln Gln Leu Thr Gly Gly Asp Leu  
 275 280 285  
 Met Ser Phe Leu Val Ala Ser Gln Thr Val Gln Ser Phe Leu Arg Val  
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325

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 <211> 461  
 <212> DNA  
 <213> Homo sapiens

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 <213> Homo sapiens

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 35 40 45  
 Arg Arg Glu Gly Ala Thr Cys Cys Ser Val Glu Lys Gln Gln Ser Pro  
 50 55 60  
 Leu Gln Pro Ala Gln Leu Ala Phe Leu Thr Leu Ser Leu Pro Gly Leu  
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 Cys Gly Arg Glu Gly Gln Ala Arg Trp Pro Ala Arg Asp Val Val Phe  
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<210> 4339  
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 <212> DNA  
 <213> Homo sapiens

<400> 4339



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<212> PRT  
<213> Homo sapiens

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35 40 45  
Asn Ser Pro Phe Leu Asn Asn Val Glu Val Glu Gln Glu Ser Phe Phe  
50 55 60  
Glu Gly Lys Asn Met Ala Leu Phe Glu Glu Glu Met Asp Ser Asn Pro  
65 70 75 80  
Met Val Ser Ser Leu Leu Asn Lys Leu Ala Asn Tyr Thr Asn Leu Ser  
85 90 95  
Gln Gly Val Val Glu His Glu Glu Asp Glu Glu Ser Arg Arg Arg Glu  
100 105 110  
Ala Lys Ala Pro Arg Met Gly Thr Phe Ile Gly Val Tyr Leu Pro Cys  
115 120 125  
Leu Gln Asn Ile Leu Gly Val Ile Leu Phe Leu Arg Leu Thr Trp Ile  
130 135 140  
Val Gly Val Ala Gly Val Leu Glu Ser Phe Leu Ile Val Ala Met Cys  
145 150 155 160  
Cys Thr Cys Thr Met Leu Thr Ala Ile Ser Met Ser Ala Ile Ala Thr  
165 170 175  
Asn Gly Val Val Pro Ala Gly Gly Ser Tyr Tyr Met Ile Ser Arg Ser  
180 185 190  
Leu Gly Pro Glu Phe Gly Gly Ala Val Gly Leu Cys Phe Tyr Leu Gly  
195 200 205  
Thr Thr Phe Ala Gly Ala Met Tyr Ile Leu Gly Thr Ile Glu Ile Phe  
210 215 220  
Leu Thr Tyr Ile Ser Pro Gly Ala Ala Ile Phe Gln Ala Glu Ala Ala  
225 230 235 240  
Gly Gly Glu Ala Ala Ala Met Leu His Asn Met Arg Val Tyr Gly Thr  
245 250 255  
Cys Thr Leu Val Leu Met Ala Leu Val Val Phe Val Gly Val Lys Tyr

3535

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Ala Val Lys His Pro Arg Leu Leu Ser Phe Thr Ser Gln Leu Lys Ala		
705	710	715
Gly Lys Gly Leu Thr Ile Val Gly Ser Val Leu Glu Gly Thr Tyr Leu		
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Asp Lys His Met Glu Ala Gln Arg Ala Glu Glu Asn Ile Arg Ser Leu		
	740	745
Met Ser Thr Glu Lys Thr Lys Gly Phe Cys Gln Leu Val Val Ser Ser		
	755	760
Ser Leu Arg Asp Gly Met Ser His Leu Ile Gln Ser Ala Gly Leu Gly		
	770	775
Gly Leu Lys His Asn Thr Val Leu Met Ala Trp Pro Ala Ser Trp Lys		
	785	790
Gln Glu Asp Asn Pro Phe Ser Trp Lys Asn Phe Val Asp Thr Val Arg		
	805	810
Asp Thr Thr Ala Ala His Gln Ala Leu Leu Val Ala Lys Asn Val Asp		
	820	825
Ser Phe Pro Gln Asn Gln Glu Arg Phe Gly Gly Gly His Ile Asp Val		
	835	840
Trp Trp Ile Val His Asp Gly Gly Met Leu Met Leu Leu Pro Phe Leu		
	850	855
Leu Arg Gln His Lys Val Trp Arg Lys Cys Arg Met Arg Ile Phe Thr		
	865	870
Val Ala Gln Val Asp Asp Asn Ser Ile Gln Met Lys Lys Asp Leu Gln		
	885	890
Met Phe Leu Tyr His Leu Arg Ile Ser Ala Glu Val Glu Val Val Glu		
	900	905
Met Val Glu Asn Asp Ile Ser Ala Phe Thr Tyr Glu Arg Thr Leu Met		
	915	920
Met Glu Gln Arg Ser Gln Met Leu Lys Gln Met Gln Leu Ser Lys Asn		
	930	935
Glu Gln Glu Arg Glu Ala Gln Leu Ile His Asp Arg Asn Thr Ala Ser		
	945	950
His Thr Ala Ala Ala Ala Arg Thr Gln Ala Pro Pro Thr Pro Asp Lys		
	965	970
Val Gln Met Thr Trp Thr Arg Glu Lys Leu Ile Ala Glu Lys Tyr Arg		
	980	985
Ser Arg Asp Thr Ser Leu Ser Gly Phe Lys Asp Leu Phe Ser Met Lys		
	995	1000
Pro Glu Trp Gly Asn Leu Asp Gln Ser Asn Val Arg Arg Met His Thr		
	1010	1015
Ala Val Lys Leu Asn Gly Val Val Leu Asn Lys Ser Gln Asp Ala Gln		
	1025	1030
Leu Val Leu Leu Asn Met Pro Gly Pro Pro Lys Asn Arg Gln Gly Asp		
	1045	1050
Glu Asn Tyr Met Glu Phe Leu Glu Val Leu Thr Glu Gly Leu Asn Arg		
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Val Leu Leu Val Arg Gly Gly Gly Arg Glu Val Ile Thr Ile Tyr Ser		
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&lt;210&gt; 4341

&lt;211&gt; 693

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4341

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693

&lt;210&gt; 4342

&lt;211&gt; 103

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4342

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Arg	Gly	Gln	Ser	Ser	Arg	Gly	Trp	Asn	Ala	Ser	Leu	Gly	Leu	Gly	Glu
			20					25					30		
Lys	Glu	Gly	Leu	Val	Ser	Val	Gly	Ile	Thr	Gln	Lys	Arg	Ala	Leu	Tyr
		35					40					45			
Met	Phe	Ser	Tyr	Lys	Tyr	Ser	Val	Met	Glu	Lys	His	Ser	Leu	Asp	Ala
	50					55					60				
Tyr	Gly	Ser	Leu	Arg	Ser	Phe	Phe	Phe	His	Pro	Leu	Phe	Leu	Glu	Lys
65					70				75					80	
Lys	Phe	Phe	Lys	Ala	Tyr	Asn	Leu	Lys	Ser	Thr	Ser	Thr	Tyr	Ser	Arg
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Asn	Ile	Val	Ala	Phe	Ser	Ile									
			100												

&lt;210&gt; 4343

&lt;211&gt; 499

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4343



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<400> 4344  
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 35 40 45  
 Gly Gly Glu Arg Arg Thr Asp Phe Arg Gly Gly Pro Gly His Ala Ala  
 50 55 60  
 Glu Thr Thr Arg Leu Pro Gly Gly Gly Gln Asp Arg Pro Cys Pro Asp  
 65 70 75 80  
 Lys Met Glu Phe Pro Val Trp Leu Gln Leu Ala Ala Arg Ser Gln Ser  
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 Ser Ser Val Ile Arg Leu Ser Asp Cys Ser Pro Phe Ile Ser Phe Ala  
 100 105 110  
 Val Val Gln Ile Leu Ile  
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<210> 4345  
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 <213> Homo sapiens

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 Thr Leu Thr His Met Ser Ile Thr Arg Leu His Glu Gln Lys Leu Val  
 35 40 45  
 Gln His Val Val Ser Gln Asn Cys Asp Gly Leu His Leu Arg Ser Gly  
 50 55 60  
 Leu Xaa Arg Thr Ala Ile Ser Glu Leu His Gly Asn Met Tyr Ile Glu  
 65 70 75 80  
 Gly Val Arg Ala Gly Val Arg Cys Asp Gly Ala His Cys Pro Pro Gln  
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 His His Cys Ala  
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 <213> Homo sapiens

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 <212> PRT  
 <213> Homo sapiens

&lt;400&gt; 4348

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 Arg Gln Cys Arg Gly Arg Ser Arg Arg Arg Val Ala Arg Ser Ser Leu  
 35 40 45  
 Pro Ser Pro Ser Ala Arg Pro Gly Arg Gly Gly Arg Pro Gly Pro Gly  
 50 55 60  
 Gly Ser Ala Gly Cys Pro Gly Leu  
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&lt;210&gt; 4349

&lt;211&gt; 2040

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4349

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<210> 4356  
<211> 509  
<212> PRT  
<213> Homo sapiens

<400> 4356  
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Gly Leu Ala Ala Lys Gln Ser Arg Ile Arg Asn Ile Ser Asn Thr Val			
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Met Lys Val Lys Gln Ile Leu Gly Arg Ser Ser Ser Asp Pro Gln Ala			
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Gln Lys Tyr Ile Ala Glu Ser Lys Cys Leu Val Ile Glu Lys Asn Gly			
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Lys Leu Arg Tyr Glu Ile Asp Thr Gly Glu Glu Thr Lys Phe Val Asn			
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Pro Glu Asp Val Ala Arg Leu Ile Phe Ser Lys Met Lys Glu Thr Ala			
115	120	125	
His Ser Val Leu Gly Ser Asp Ala Asn Asp Val Val Ile Thr Val Pro			
130	135	140	
Phe Asp Phe Gly Glu Lys Gln Lys Asn Ala Leu Gly Glu Ala Ala Arg			
145	150	155	160
Ala Ala Gly Phe Asn Val Leu Arg Leu Ile His Glu Pro Ser Ala Ala			
165	170	175	
Leu Leu Ala Tyr Gly Ile Gly Gln Asp Ser Pro Thr Gly Lys Ser Asn			
180	185	190	
Ile Leu Val Phe Lys Leu Gly Gly Thr Ser Leu Ser Leu Ser Val Met			
195	200	205	
Glu Val Asn Ser Gly Ile Tyr Arg Val Leu Ser Thr Asn Thr Asp Asp			
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Asn Ile Gly Gly Ala His Phe Thr Glu Thr Leu Ala Gln Tyr Leu Ala			
225	230	235	240
Ser Glu Phe Gln Arg Ser Phe Lys His Asp Val Arg Gly Asn Ala Arg			
245	250	255	
Ala Met Met Lys Leu Thr Asn Ser Ala Glu Val Ala Lys His Ser Leu			
260	265	270	
Ser Thr Leu Gly Ser Ala Asn Cys Phe Leu Asp Ser Leu Tyr Glu Gly			
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Gln Asp Phe Asp Cys Asn Val Ser Arg Ala Arg Phe Glu Leu Leu Cys			
290	295	300	
Ser Pro Leu Phe Asn Lys Cys Ile Glu Ala Ile Arg Gly Leu Leu Asp			
305	310	315	320
Gln Asn Gly Phe Thr Ala Asp Asp Ile Asn Lys Val Val Leu Cys Gly			
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Gly Ser Ser Arg Ile Pro Lys Leu Gln Gln Leu Ile Lys Asp Leu Phe			
340	345	350	
Pro Ala Val Glu Leu Leu Asn Ser Ile Pro Pro Asp Glu Val Ile Pro			
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Ile Gly Ala Ala Ile Glu Ala Gly Ile Leu Ile Gly Lys Glu Asn Leu			
370	375	380	
Leu Val Glu Asp Ser Leu Met Ile Glu Cys Ser Ala Arg Asp Ile Leu			
385	390	395	400
Val Lys Gly Val Asp Glu Ser Gly Ala Ser Arg Phe Thr Val Leu Phe			
405	410	415	
Pro Ser Gly Thr Pro Leu Pro Ala Arg Arg Gln His Thr Leu Gln Ala			
420	425	430	
Pro Gly Ser Ile Ser Ser Val Cys Leu Glu Leu Tyr Glu Ser Asp Gly			

435                                      440                                      445  
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 Asp Leu Asp Lys Lys Glu Asn Gly Leu Arg Asp Ile Leu Ala Val Leu  
 465                                      470                                      475                                      480  
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<210> 4357  
 <211> 421  
 <212> DNA  
 <213> Homo sapiens

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 <212> PRT  
 <213> Homo sapiens

<400> 4358  
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 20                                      25                                      30  
 Gln Lys Pro Trp Pro Ser Pro Ala Val Phe Phe Arg Arg Asn Val Arg  
 35                                      40                                      45  
 Gly Leu Pro Pro Arg Phe Ser Ser Pro Thr Pro Leu Trp Arg Lys Val  
 50                                      55                                      60  
 Leu Ser Thr Ala Val Val Gly Ala Pro Leu Leu Leu Gly Ala Arg Tyr  
 65                                      70                                      75                                      80  
 Val Met Ala Glu Ala Arg Glu Lys Arg Arg Met Arg Leu Val Val Asp  
 85                                      90                                      95  
 Gly Met Gly Arg Phe Cys Arg Ser Leu Lys Val Gly Leu Gln Ile Ser  
 100                                      105                                      110  
 Leu Asp Tyr

115

&lt;210&gt; 4359

&lt;211&gt; 3661

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4359

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3552

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 3661

&lt;210&gt; 4360

&lt;211&gt; 670

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4360

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			20					25					30		
Thr	Phe	Gly	Pro	Ala	Phe	Ser	Ala	Val	Thr	Thr	Ile	Thr	Lys	Ala	Asp
		35					40					45			
Gly	Thr	Ser	Thr	Tyr	Lys	Gln	His	Cys	Arg	Thr	Pro	Ser	Ser	Ser	Ser
	50				55						60				
Thr	Leu	Ala	Tyr	Ser	Pro	Arg	Asp	Glu	Glu	Asp	Ser	Met	Pro	Pro	Ile
65					70					75					80
Ser	Thr	Pro	Arg	Arg	Ser	Asp	Ser	Ala	Ile	Ser	Val	Arg	Ser	Leu	His
			85						90					95	
Ser	Glu	Ser	Ser	Met	Ser	Leu	Arg	Ser	Thr	Phe	Ser	Leu	Pro	Glu	Glu
			100					105					110		
Glu	Glu	Glu	Pro	Glu	Pro	Leu	Val	Phe	Ala	Glu	Gln	Pro	Ser	Val	Lys
		115					120					125			
Leu	Cys	Cys	Gln	Leu	Cys	Cys	Ser	Val	Phe	Lys	Asp	Pro	Val	Ile	Thr
	130					135					140				
Thr	Cys	Gly	His	Thr	Phe	Cys	Arg	Arg	Cys	Ala	Leu	Lys	Ser	Glu	Lys
145					150					155					160
Cys	Pro	Val	Asp	Asn	Val	Lys	Leu	Thr	Val	Val	Val	Asn	Asn	Ile	Ala
			165					170						175	
Val	Ala	Glu	Gln	Ile	Gly	Glu	Leu	Phe	Ile	His	Cys	Arg	His	Gly	Cys



3555

610	615	620
Leu Arg Val Trp Ser Met Asp Asn Met Ile Cys Thr Gln Thr Leu Leu		
625	630	635
Arg His Gln Gly Ser Val Thr Ala Leu Ala Val Ser Arg Gly Arg Leu		640
	645	650
Phe Ser Gly Ala Val Asp Ser Thr Val Lys Val Trp Thr Cys		655
	660	665
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<210> 4361  
 <211> 574  
 <212> DNA  
 <213> Homo sapiens

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 120  
 atgagctgga gggcccacta cggggagggtc tactctgtgg agttcagcta tgatgagaac  
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<210> 4362  
 <211> 116  
 <212> PRT  
 <213> Homo sapiens

<400> 4362  
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 20 25 30  
 Asp Met Gln Gln His Glu Cys Ala Met Ser Trp Arg Ala His Tyr Gly  
 35 40 45  
 Glu Val Tyr Ser Val Glu Phe Ser Tyr Asp Glu Asn Thr Val Tyr Ser  
 50 55 60  
 Ile Gly Glu Asp Gly Lys Val Gly Gly Ser Arg Ile Gln Ile Arg Glu  
 65 70 75 80  
 His Arg Asp Asp Met Trp Ala Gly Cys Arg Leu Trp Pro Tyr Leu Leu  
 85 90 95  
 Leu Ala Leu Gln Pro Gly Ala Ser Phe Cys Ser Phe Val Ile Cys Arg

Ile Gly Ile Asn  
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105

110

<210> 4363  
<211> 1222  
<212> DNA  
<213> Homo sapiens

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<211> 75  
 <212> PRT  
 <213> Homo sapiens

<400> 4364  
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 Phe Arg Gly Gln Leu Val Gln Pro Ala Gly Ser Val Gln Ile Pro Asp  
 35 40 45  
 Asn His Ser Ser Thr Arg Ala Gln Arg Pro Gly Pro Gly Gly Arg Ser  
 50 55 60  
 Ser Ala Cys Val Pro Thr Ser Thr Ser Met Arg  
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<210> 4365  
 <211> 469  
 <212> DNA  
 <213> Homo sapiens

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<210> 4366  
 <211> 156  
 <212> PRT  
 <213> Homo sapiens

<400> 4366  
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 35 40 45  
 Val Ala Ile Gly Gly Thr Ser Phe Pro Thr Tyr Tyr Arg Ser Met Tyr  
 50 55 60  
 Pro Lys Glu Val Ile Met Thr Gly Asp Met Met Leu Glu Lys Val Tyr

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65              70              75              80
Arg Glu Gly Asp Lys Leu Val Ala Val Leu Glu Asn Glu Tyr Thr Gly
              85              90              95
Ala Lys Glu Glu Arg Val Val Asp Gln Val Val Val Glu Asn Gly Val
              100              105              110
Arg Pro Asp Glu Glu Ile Tyr Tyr Gly Leu Lys Glu Gly Ser Arg Asn
              115              120              125
Lys Gly Gln Ile Asp Val Glu Ala Leu Phe Ala Ile Lys Pro Gln Pro
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Ser Leu Asn Thr Leu Asn Glu Glu Ala Ala Gly Asp
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<210> 4367  
 <211> 852  
 <212> DNA  
 <213> Homo sapiens

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 852

<210> 4368  
 <211> 102  
 <212> PRT  
 <213> Homo sapiens

&lt;400&gt; 4368

Xaa Leu Gly Arg Gly Met Ala Leu Arg Asp Cys Thr Arg Arg Lys Glu  
 1 5 10 15  
 Leu Gly Pro Ala Gly Leu Leu Gln Val Glu Phe Pro Glu Ala Arg Ile  
 20 25 30  
 Phe Glu Glu Thr Leu Asn Ile Leu Ile Tyr Glu Thr Pro Arg Gly Pro  
 35 40 45  
 Asp Pro Ala Leu Leu Glu Ala Thr Gly Gly Ala Ala Gly Ala Gly Gly  
 50 55 60  
 Ala Gly Arg Gly Glu Asp Glu Glu Asn Arg Glu His Arg Val Arg Arg  
 65 70 75 80  
 Ile His Val Arg Arg His Ile Thr His Asp Glu Arg Pro His Gly Gln  
 85 90 95  
 Gln Ile Val Phe Lys Asp  
 100

&lt;210&gt; 4369

&lt;211&gt; 1264

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4369

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 actacagaaa aggaagtagc agaaccactc ctggacctga aggaaggaat agaccagttg  
 180  
 gagaacaata aaaccttggg ctttatcctg tctactctct tagccattgg gaactttcta  
 240  
 aatggaacta atgccaaagc gtttgagtta agctacctcg agaagggtcc agaagtcaaa  
 300  
 gacacagtgc acaagcagtc gcttctccac catgtgtgca ccatgggtgg agaaaacttc  
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 420  
 tttgatcaac ttcaggataa tttatgtcag atggagagaa gatgcaaagc ttcattggat  
 480  
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 720  
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 780  
 gggaagatga tcaccgattc tggcaagtcc tccggcagtt ctccggcgcc cccaagccag  
 840  
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 960

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 1080  
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 1140  
 aaacttgtag acaaaagaaa gcacagattg tttacctgtt gtggatttta gatgtaacaa  
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 1264

<210> 4370  
 <211> 322  
 <212> PRT  
 <213> Homo sapiens

<400> 4370  
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 20 25 30  
 Trp Ala Phe Lys Met Asp Tyr Glu Thr Thr Glu Lys Glu Val Ala Glu  
 35 40 45  
 Pro Leu Leu Asp Leu Lys Glu Gly Ile Asp Gln Leu Glu Asn Asn Lys  
 50 55 60  
 Thr Leu Gly Phe Ile Leu Ser Thr Leu Leu Ala Ile Gly Asn Phe Leu  
 65 70 75 80  
 Asn Gly Thr Asn Ala Lys Ala Phe Glu Leu Ser Tyr Leu Glu Lys Val  
 85 90 95  
 Pro Glu Val Lys Asp Thr Val His Lys Gln Ser Leu Leu His His Val  
 100 105 110  
 Cys Thr Met Val Val Glu Asn Phe Pro Asp Ser Ser Asp Leu Tyr Ser  
 115 120 125  
 Glu Ile Gly Ala Ile Thr Arg Ser Ala Lys Val Asp Phe Asp Gln Leu  
 130 135 140  
 Gln Asp Asn Leu Cys Gln Met Glu Arg Arg Cys Lys Ala Ser Trp Asp  
 145 150 155 160  
 His Leu Lys Ala Ile Ala Lys His Glu Met Lys Pro Val Leu Lys Gln  
 165 170 175  
 Arg Met Ser Glu Phe Leu Lys Asp Cys Ala Glu Arg Ile Ile Ile Leu  
 180 185 190  
 Lys Ile Val His Arg Arg Ile Ile Asn Arg Phe His Ser Phe Leu Leu  
 195 200 205  
 Phe Met Gly His Pro Pro Tyr Ala Ile Arg Glu Val Asn Ile Asn Lys  
 210 215 220  
 Phe Cys Arg Ile Ile Ser Glu Phe Ala Leu Glu Tyr Arg Thr Thr Arg  
 225 230 235 240  
 Glu Arg Val Leu Gln Gln Lys Gln Lys Arg Ala Asn His Arg Glu Arg  
 245 250 255  
 Asn Lys Thr Arg Gly Lys Met Ile Thr Asp Ser Gly Lys Phe Ser Gly  
 260 265 270  
 Ser Ser Pro Ala Pro Pro Ser Gln Pro Gln Gly Leu Ser Tyr Ala Glu

	275		280		285										
Asp	Ala	Ala	Glu	His	Glu	Asn	Met	Lys	Ala	Val	Leu	Lys	Thr	Ser	Ser
	290		295		300										
Pro	Ser	Arg	Ser	Pro	Leu	His	Ile	Pro	Ser	Pro	Ser	Cys	Gln	Leu	Cys
305				310				315						320	
Phe	Ser														

<210> 4371  
 <211> 907  
 <212> DNA  
 <213> Homo sapiens

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 gccatcgaca taggcgggtc gttaaccaag ctggcctact attcaacggt acagcacaaa  
 180  
 gtcgccaagg tgcggtcttt cgaccactcc ggaaaggaca cagaacgtga acatgagccg  
 240  
 ccctatgaga ttccagttca agaagagatc actgctcgac tgcacttcat taagtttgag  
 300  
 aataacctaca tcgaagcctg cctggacttc atcaaagacc atctcgtcaa cacagagacc  
 360  
 aaggtcatcc aggcgaccgg gggcggggcc tacaagttca aggacctcat cgaagagaag  
 420  
 ctgcggctga aagtcgacaa ggaggacgtg atgacgtgcc tgattaagggt gtgcaacttc  
 480  
 gtgtcaaga acatccccca tgaggccttc gtgtaccaga aggattccga ccctgagttc  
 540  
 cggttccaga ccaaccaccc ccacattttc ccctatcttc ttgtcaatat cggtcttgga  
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 720  
 ctctgcacc tggcctcgag gggccagcac agcaatgtgg acatgctggt gcgggacgtc  
 780  
 tacggcggcg cccaccagac tctcgggctg agcgggaacc tcatcgccag cagcttcggg  
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 900  
 atgatca  
 907

<210> 4372  
 <211> 302  
 <212> PRT  
 <213> Homo sapiens

<400> 4372  
 Thr Phe Lys Met Ala Glu Cys Gly Ala Ser Gly Ser Gly Ser Ser Gly



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 20 25 30  
 Asn Leu Glu Asn Ala Lys Arg Phe Ala Ile Asp Ile Gly Gly Ser Leu  
 35 40 45  
 Thr Lys Leu Ala Tyr Tyr Ser Thr Val Gln His Lys Val Ala Lys Val  
 50 55 60  
 Arg Ser Phe Asp His Ser Gly Lys Asp Thr Glu Arg Glu His Glu Pro  
 65 70 75 80  
 Pro Tyr Glu Ile Ser Val Gln Glu Glu Ile Thr Ala Arg Leu His Phe  
 85 90 95  
 Ile Lys Phe Glu Asn Thr Tyr Ile Glu Ala Cys Leu Asp Phe Ile Lys  
 100 105 110  
 Asp His Leu Val Asn Thr Glu Thr Lys Val Ile Gln Ala Thr Gly Gly  
 115 120 125  
 Gly Ala Tyr Lys Phe Lys Asp Leu Ile Glu Glu Lys Leu Arg Leu Lys  
 130 135 140  
 Val Asp Lys Glu Asp Val Met Thr Cys Leu Ile Lys Gly Cys Asn Phe  
 145 150 155 160  
 Val Leu Lys Asn Ile Pro His Glu Ala Phe Val Tyr Gln Lys Asp Ser  
 165 170 175  
 Asp Pro Glu Phe Arg Phe Gln Thr Asn His Pro His Ile Phe Pro Tyr  
 180 185 190  
 Leu Leu Val Asn Ile Gly Ser Gly Val Ser Ile Val Lys Val Glu Thr  
 195 200 205  
 Glu Asp Arg Phe Glu Trp Val Gly Gly Ser Ser Ile Gly Gly Gly Thr  
 210 215 220  
 Phe Trp Gly Leu Gly Ala Leu Leu Thr Lys Thr Lys Lys Phe Asp Glu  
 225 230 235 240  
 Leu Leu His Leu Ala Ser Arg Gly Gln His Ser Asn Val Asp Met Leu  
 245 250 255  
 Val Arg Asp Val Tyr Gly Gly Ala His Gln Thr Leu Gly Leu Ser Gly  
 260 265 270  
 Asn Leu Ile Ala Ser Ser Phe Gly Lys Ser Ala Thr Ala Asp Gln Glu  
 275 280 285  
 Phe Ser Lys Glu Asp Met Ala Lys Ser Leu Leu His Met Ile  
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&lt;210&gt; 4373

&lt;211&gt; 1017

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4373

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 ctgcgccgc tccagcacct ctgaagtttt gcagcgccca gaaaggaggc gaggaaggag  
 120  
 ggagtgtgtg agaggaggga gcaaaaagct caccctaaaa catttatttc aaggagaaaa  
 180  
 gaaaaagggg gggcgcaaaa atggctgggg caattataga aaacatgagc accaagaagc  
 240  
 tgtgcattgt tggtgggatt ctgctcgtgt tccaaatcat cgcctttctg gtgggaggct  
 300

tgattgctcc agggcccaca acggcagtgt cctacatgtc ggtgaaatgt gtggatgccc  
 360  
 gtaagaacca tcacaagaca aaatgggttcg tgccttgggg acccaatcat tgtgacaaga  
 420  
 tccgagacat tgaagaggca attccaaggg aaattgaagc caatgacatc gtgttttctg  
 480  
 ttcacattcc cctccccac atggagatga gtccttgggtt ccaattcatg ctgtttatcc  
 540  
 tgcagctgga cattgccttc aagctaaaca accaaatcag agaaaatgca gaagtctcca  
 600  
 tggacgtttc cctggcttac cgtgatgacg cgtttgctga gtggactgaa atggcccatg  
 660  
 aaagagtacc acggaaactc aaatgcacct tcacatctcc caagactcca gagcatgagg  
 720  
 gccgttacta tgaatgtgat gtccttcctt tcatggaaat tgggtctgtg gcccataagt  
 780  
 tttacctttt aaacatccgg ctgcctgtga atgagaagaa gaaaatcaat gtgggaattg  
 840  
 gggagataaa ggatatccgg ttggtgggga tccacaaaaa tggaggcttc accaaggtgt  
 900  
 ggtttgccat gaagaccttc cttacgccca gcattctcat cattatggtg tggatttga  
 960  
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 1017

&lt;210&gt; 4374

&lt;211&gt; 272

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4374

Met	Ala	Gly	Ala	Ile	Ile	Glu	Asn	Met	Ser	Thr	Lys	Lys	Leu	Cys	Ile
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Val	Gly	Gly	Ile	Leu	Leu	Val	Phe	Gln	Ile	Ile	Ala	Phe	Leu	Val	Gly
			20					25					30		
Gly	Leu	Ile	Ala	Pro	Gly	Pro	Thr	Thr	Ala	Val	Ser	Tyr	Met	Ser	Val
		35					40					45			
Lys	Cys	Val	Asp	Ala	Arg	Lys	Asn	His	His	Lys	Thr	Lys	Trp	Phe	Val
	50					55					60				
Pro	Trp	Gly	Pro	Asn	His	Cys	Asp	Lys	Ile	Arg	Asp	Ile	Glu	Glu	Ala
65				70					75				80		
Ile	Pro	Arg	Glu	Ile	Glu	Ala	Asn	Asp	Ile	Val	Phe	Ser	Val	His	Ile
			85					90					95		
Pro	Leu	Pro	His	Met	Glu	Met	Ser	Pro	Trp	Phe	Gln	Phe	Met	Leu	Phe
			100					105					110		
Ile	Leu	Gln	Leu	Asp	Ile	Ala	Phe	Lys	Leu	Asn	Asn	Gln	Ile	Arg	Glu
		115					120					125			
Asn	Ala	Glu	Val	Ser	Met	Asp	Val	Ser	Leu	Ala	Tyr	Arg	Asp	Asp	Ala
	130					135					140				
Phe	Ala	Glu	Trp	Thr	Glu	Met	Ala	His	Glu	Arg	Val	Pro	Arg	Lys	Leu
145				150					155				160		
Lys	Cys	Thr	Phe	Thr	Ser	Pro	Lys	Thr	Pro	Glu	His	Glu	Gly	Arg	Tyr
			165					170					175		
Tyr	Glu	Cys	Asp	Val	Leu	Pro	Phe	Met	Glu	Ile	Gly	Ser	Val	Ala	His

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<210> 4375
<211> 1966
<212> DNA
<213> Homo sapiens
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120
cgcctgacgg ccagctttgg gagggccggc cccgggatgc tacacacaac ccagctgtac
180
cagcatgtgc cagagacacg ctggccaatc gtgtactcgc cgcgctacaa catcaccttc
240
atgggcctgg agaagctgca tccctttgat gccggaaaat ggggcaaagt gatcaatttc
300
ctaaaagaag agaagcttct gtctgacagc atgctggtgg aggcgcggga ggctcggag
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600
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660
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720
gagcgagact tcatggacga caagtgtgtg acatgcatgg atgtctacaa ccgccacatc
780
taccagggg accgctttgc caagcaggcc atcaggcgga aggtggagct ggagtggggc
840
acagaggatg atgagtacct ggataagggt gagaggaaca tcaagaaatc cctccaggag
900
cacctgcccg acgtggtggt atacaatgca ggcaccgaca tcctcgaggg ggaccgcctt
960
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1020
gtccgtggcc gccgggtgcc catccttatg gtgacctcag gcgggtacca gaagcgcaca
1080
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 1200  
 cccttgctgc cctgcctgtc acgtggccct gcctatccgc cccttagtgc tttttgtttt  
 1260  
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 1860  
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 1920  
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 1966

&lt;210&gt; 4376

&lt;211&gt; 399

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4376

Lys	Val	Pro	Ala	Leu	Tyr	Thr	Thr	Thr	Ser	Gly	Arg	Cys	Ser	Trp	Arg
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Asp	Phe	Leu	Met	Phe	Leu	Ser	Thr	Leu	Ser	Arg	Tyr	Ser	Ser	Ser	Ser
		20						25					30		
Val	Pro	His	Ser	Ser	Ser	Thr	Phe	Arg	Leu	Thr	Ala	Ser	Phe	Gly	Arg
		35					40					45			
Ala	Gly	Pro	Gly	Met	Leu	His	Thr	Thr	Gln	Leu	Tyr	Gln	His	Val	Pro
	50					55					60				
Glu	Thr	Arg	Trp	Pro	Ile	Val	Tyr	Ser	Pro	Arg	Tyr	Asn	Ile	Thr	Phe
65					70					75				80	
Met	Gly	Leu	Glu	Lys	Leu	His	Pro	Phe	Asp	Ala	Gly	Lys	Trp	Gly	Lys
				85					90					95	
Val	Ile	Asn	Phe	Leu	Lys	Glu	Glu	Lys	Leu	Leu	Ser	Asp	Ser	Met	Leu
		100						105					110		
Val	Glu	Ala	Arg	Glu	Ala	Ser	Glu	Glu	Asp	Leu	Leu	Val	Val	His	Thr
		115					120						125		
Arg	Arg	Tyr	Leu	Asn	Glu	Leu	Lys	Trp	Ser	Phe	Ala	Val	Ala	Thr	Ile

130 135 140  
 Thr Glu Ile Pro Pro Val Ile Phe Leu Pro Asn Phe Leu Val Gln Arg  
 145 150 155 160  
 Lys Val Leu Arg Pro Leu Arg Thr Gln Thr Gly Gly Thr Ile Met Ala  
 165 170 175  
 Gly Lys Leu Ala Val Glu Arg Gly Trp Ala Ile Asn Val Gly Gly Gly  
 180 185 190  
 Phe His His Cys Ser Ser Asp Arg Gly Gly Gly Phe Cys Ala Tyr Ala  
 195 200 205  
 Asp Ile Thr Leu Ala Ile Lys Phe Leu Phe Glu Arg Val Glu Gly Ile  
 210 215 220  
 Ser Arg Ala Thr Ile Ile Asp Leu Asp Ala His Gln Gly Asn Gly His  
 225 230 235 240  
 Glu Arg Asp Phe Met Asp Asp Lys Cys Val Thr Cys Met Asp Val Tyr  
 245 250 255  
 Asn Arg His Ile Tyr Pro Gly Asp Arg Phe Ala Lys Gln Ala Ile Arg  
 260 265 270  
 Arg Lys Val Glu Leu Glu Trp Gly Thr Glu Asp Asp Glu Tyr Leu Asp  
 275 280 285  
 Lys Val Glu Arg Asn Ile Lys Lys Ser Leu Gln Glu His Leu Pro Asp  
 290 295 300  
 Val Val Val Tyr Asn Ala Gly Thr Asp Ile Leu Glu Gly Asp Arg Leu  
 305 310 315 320  
 Gly Gly Leu Ser Ile Ser Pro Ala Gly Ile Val Lys Arg Asp Glu Leu  
 325 330 335  
 Val Phe Arg Met Val Arg Gly Arg Arg Val Pro Ile Leu Met Val Thr  
 340 345 350  
 Ser Gly Gly Tyr Gln Lys Arg Thr Ala Arg Ile Ile Ala Asp Ser Ile  
 355 360 365  
 Leu Asn Leu Phe Gly Leu Gly Leu Ile Gly Pro Glu Ser Pro Ser Val  
 370 375 380  
 Ser Ala Gln Asn Ser Asp Thr Pro Leu Leu Pro Pro Ala Val Pro  
 385 390 395

&lt;210&gt; 4377

&lt;211&gt; 812

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4377

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 120  
 cgaagcctga ggctgctgac cctggagcag ccgcaggggg attctatgat gacctgagag  
 180  
 caggcccagc tcttggccaa cctggcgcggt ctcattccagg ccaagaaggc gctggacctg  
 240  
 ggcaccttca cgggctactc cgccctggcc ctggccctgg cgctgcccgc ggacggggcg  
 300  
 gtggtgacct gcgaggtgga cgcgcagccc ccggagctgg gacggcccct gtggaggcag  
 360  
 gccgaggcgg agcacaagat tcgactccgg ctgaagcccg ccttggagac cctggagcag  
 420

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 480  
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 540  
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 660  
 ctgcccctgg gcgatggact caccttggcc ttcaagatct agggctggcc cctagttagt  
 720  
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 780  
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 812

<210> 4378  
 <211> 233  
 <212> PRT  
 <213> Homo sapiens

<400> 4378  
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 Leu Leu Pro Pro Glu Asp Ser Arg Leu Trp Gln Tyr Leu Leu Ser Arg  
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 Ser Met Arg Glu His Pro Ala Leu Arg Ser Leu Arg Leu Leu Thr Leu  
 35 40 45  
 Glu Gln Pro Gln Gly Asp Ser Met Met Thr Cys Glu Gln Ala Gln Leu  
 50 55 60  
 Leu Ala Asn Leu Ala Arg Leu Ile Gln Ala Lys Lys Ala Leu Asp Leu  
 65 70 75 80  
 Gly Thr Phe Thr Gly Tyr Ser Ala Leu Ala Leu Ala Leu Ala Leu Pro  
 85 90 95  
 Ala Asp Gly Arg Val Val Thr Cys Glu Val Asp Ala Gln Pro Pro Glu  
 100 105 110  
 Leu Gly Arg Pro Leu Trp Arg Gln Ala Glu Ala Glu His Lys Ile Arg  
 115 120 125  
 Leu Arg Leu Lys Pro Ala Leu Glu Thr Leu Asp Glu Leu Leu Ala Ala  
 130 135 140  
 Gly Glu Ala Gly Thr Phe Asp Val Ala Val Val Asp Ala Asp Lys Glu  
 145 150 155 160  
 Asn Cys Ser Ala Tyr Tyr Glu Arg Cys Leu Gln Leu Leu Arg Pro Gly  
 165 170 175  
 Gly Ile Leu Ala Val Leu Arg Val Leu Trp Arg Gly Lys Val Leu Gln  
 180 185 190  
 Pro Pro Lys Gly Asp Val Ala Ala Glu Cys Val Arg Asn Leu Asn Glu  
 195 200 205  
 Arg Ile Arg Arg Asp Val Arg Val Tyr Ile Ser Leu Leu Pro Leu Gly  
 210 215 220  
 Asp Gly Leu Thr Leu Ala Phe Lys Ile  
 225 230

<210> 4379  
 <211> 2347

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4379

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120  
ggggaggacc cggccccac ctgcctcacc cgcacggggc tgttcctgcg tttcctctgc  
180  
agccggttcc cgcggggcgc acagctgcgg ggcgcgctgc ggacgctgag cctcctggcc  
240  
gcgcagggcc tgtgggcgca gacgtccgtg cttcaccgag aggatctgga aaggctcggg  
300  
gtgcaggagt ccgacctccg tctgttcctg gacggagaca tcctccgcca ggacagagtc  
360  
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&lt;210&gt; 4380

&lt;211&gt; 652

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4380

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Ala	Gln	Thr	Ser	Val	Leu	His	Arg	Glu	Asp	Leu	Glu	Arg	Leu	Gly	Val
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Gln	Glu	Ser	Asp	Leu	Arg	Leu	Phe	Leu	Asp	Gly	Asp	Ile	Leu	Arg	Gln
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Gln	Phe	Leu	Thr	Ala	Leu	Phe	Tyr	Thr	Leu	Glu	Lys	Glu	Glu	Glu	Glu
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Ser	Gly	Val	Glu	Arg	Leu	Arg	Asn	Pro	Asp	Leu	Ile	Gln	Ala	Gly	Tyr



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 405 410 415  
 Gly Ala Lys Leu Leu Tyr Thr Thr Leu Arg His Pro Lys Cys Phe Leu  
 420 425 430  
 Gln Arg Leu Ser Leu Glu Asn Cys His Leu Thr Glu Ala Asn Cys Lys  
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 Glu Lys Ser Ser Leu Leu Cys Leu Asp Leu Gly Leu Asn His Ile Gly  
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 Val Lys Gly Met Lys Phe Leu Cys Glu Ala Leu Arg Lys Pro Leu Cys  
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 545 550 555 560  
 Cys Glu Asp Val Cys Ser Ala Leu Ser Cys Asn Gln Ser Leu Val Thr

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Phe	Glu	Thr	Leu	Thr	Cys	Ser	Ser	Gly	Thr	Leu	Arg	Thr	Leu	Arg	Leu		
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Lys	Ile	Asp	Asp	Phe	Asn	Asp	Glu	Leu	Asn	Lys	Leu	Leu	Glu	Glu	Ile		
	610					615					620						
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&lt;210&gt; 4381

&lt;211&gt; 1638

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4381

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 <213> Homo sapiens

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 Phe Ser Ala His Tyr Asp Ala Val Glu Ala Glu Leu Lys Ser Ser Ala  
 50 55 60  
 Val Gly Leu Val Thr Leu Asn Asp Met Lys Ala Arg Gln Glu Ala Leu  
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 Arg Lys Arg Lys Ile Ser Cys Leu Ser Phe Ala Leu Asp Asp Leu Asp  
 115 120 125  
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 Asn Pro Asp Val Asp Thr Ser Phe Leu Pro Asp Arg Asp Arg Glu Glu  
 145 150 155 160  
 Glu Glu Asn Arg Leu Arg Glu Glu Leu Arg Gln Glu Trp Glu Ala Gln  
 165 170 175  
 Arg Glu Lys Val Lys Asp Glu Glu Met Glu Val Thr Phe Ser Tyr Trp  
 180 185 190  
 Asp Gly Ser Gly His Arg Arg Thr Val Arg Val Arg Lys Gly Asn Thr  
 195 200 205  
 Val Gln Gln Phe Leu Lys Lys Ala Leu Gln Gly Leu Arg Lys Asp Phe

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Arg Ala Arg Gly Lys Ser Gly Pro Leu Phe Ser Phe Asp Val His Asp
      260      265      270
Asp Val Arg Leu Leu Ser Asp Ala Thr Met Glu Lys Asp Glu Ser His
      275      280      285
Ala Gly Lys Val Val Leu Arg Ser Trp Tyr Glu Lys Asn Lys His Ile
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Phe Pro Ala Ser Arg Trp Glu Ala Tyr Asp Pro Glu Lys Lys Trp Asp
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Lys Tyr Thr Ile Arg
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<210> 4383  
 <211> 419  
 <212> DNA  
 <213> Homo sapiens

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<210> 4384  
 <211> 139  
 <212> PRT  
 <213> Homo sapiens

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<400> 4384
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Gly Thr Gln His Lys Met Lys Tyr Lys Ala Pro Thr Asp Tyr Cys Phe
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Val Leu Lys His Pro Gln Ile Gln Lys Glu Ser Gln Tyr Ile Lys Tyr
      35      40      45
Leu Cys Cys Asp Asp Thr Arg Thr Leu Asn Gln Trp Val Met Gly Ile
      50      55      60
Arg Ile Ala Lys Tyr Gly Lys Thr Leu Tyr Asp Asn Tyr Gln Arg Ala
      65      70      75      80
Val Ala Lys Ala Gly Leu Ala Ser Arg Trp Thr Asn Leu Gly Thr Val

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				85					90					95					
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Thr	Gln	Pro	Asn	Gly	Gln	Ile	Pro	Gln	Ala	Thr	His	Phe	Phe	Ser	Ala				
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<210> 4385  
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<210> 4386  
 <211> 85  
 <212> PRT  
 <213> Homo sapiens

<400> 4386  
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 Val Ser Leu Gln Ser Pro Asp Arg Arg Leu Ser His Asp Pro Ala Ala  
 35 40 45  
 Ser Ser Trp Ser Gly Phe Cys Gly Ile Ser Pro Ala Phe Ser Ala Phe

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<210> 4387
<211> 341
<212> DNA
<213> Homo sapiens
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<210> 4388
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<213> Homo sapiens
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<210> 4389
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<212> DNA
<213> Homo sapiens
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<210> 4390

<211> 335

<212> PRT

<213> Homo sapiens

<400> 4390

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Ser	Ala	Arg	Glu	Lys	Ala	Leu	Arg	Gly	Ala	Leu	Arg	Ala	Ser	Val	Glu
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Ile	Lys	Gly	Phe	Arg	Tyr	Glu	Leu	Tyr	Cys	Leu	Ala	Arg	Ala	Ala	Arg
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Thr	Pro	Leu	Cys	Leu	Val	Tyr	Cys	Val	Arg	Pro	Gly	Gly	Pro	Ile	Ala
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Gly	Pro	Gln	Val	Ala	Gly	Ala	Asn	Glu	Asn	Pro	Gly	Arg	Asn	Val	Ser
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Val	Ser	Trp	Arg	Pro	Arg	Ala	Glu	Glu	Asp	Gly	Arg	Ala	Gln	Ala	Ala
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&lt;211&gt; 2171

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4393

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<400> 4394

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Glu Lys Leu Gln Arg Val Leu Glu Lys Ala Ala Leu Lys Leu Gly Arg
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Gly Val Ile Tyr Thr Arg Asn Lys Met Asn Gly Thr Leu Thr Ala Val
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Glu Ser Phe Leu Thr Ile His Ser Gly Pro Glu Gly Leu Ser Ile His
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Asp Gly Thr Trp Lys Ser Ala Ile Tyr Gly Phe Gly Asp Gln Ser Asn
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Lys Gly Tyr Ser Ile Pro Phe Met Gly Ser Asp Val Ser Val Val Arg
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      260          265          270
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Ser Lys Gln Gly Pro Thr Gln Lys Gln Ile Asp Ala Ala Ser Phe Thr
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Leu Thr Phe Phe Gly Gln Gly Tyr Ser Gln Gly Thr Gly Thr Asp Lys
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Asn Lys Pro Asn Ile Lys Ile Cys Thr Gln Val Lys Gly Pro Glu Ala
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Gly Tyr Val Ala Thr Pro Ile Ala Met Val Gln Ala Ala Met Thr Leu

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<211> 463

<212> PRT

<213> Homo sapiens

<400> 4396

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Ser	Thr	Glu	Ser	Ile	Arg	Leu	Glu	Val	Gly	Val	Thr	Gly	Glu	Ser	Gly
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Val	Asp	Phe	Ser	Arg	Tyr	Asp	Phe	Phe	Leu	Leu	Val	Ser	Pro	Arg	Arg
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&lt;211&gt; 2543

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4397

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 aaaaaaaaaa aaaaaaaaaa aaa  
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 <212> PRT  
 <213> Homo sapiens

<400> 4398  
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 Arg Asp Pro Asp Lys Tyr Cys Pro Ser Tyr Asn Lys Ser Pro Gln Ser  
 35 40 45  
 Asn Ser Pro Val Leu Leu Ser Arg Leu His Phe Glu Lys Asp Ala Asp  
 50 55 60  
 Ser Ser Glu Arg Ile Ile Ala Pro Met Arg Trp Gly Leu Val Pro Ser  
 65 70 75 80  
 Trp Phe Lys Glu Ser Asp Pro Ser Lys Leu Gln Phe Asn Thr Thr Asn  
 85 90 95  
 Cys Arg Ser Asp Thr Val Met Glu Lys Arg Ser Phe Lys Val Pro Leu  
 100 105 110  
 Gly Lys Gly Arg Arg Cys Val Val Leu Ala Asp Gly Phe Tyr Glu Trp  
 115 120 125  
 Gln Arg Cys Gln Gly Thr Asn Gln Arg Gln Pro Tyr Phe Ile Tyr Phe  
 130 135 140  
 Pro Gln Ile Lys Thr Glu Lys Ser Gly Ser Ile Gly Ala Ala Asp Ser  
 145 150 155 160  
 Pro Glu Asn Trp Glu Lys Val Trp Asp Asn Trp Arg Leu Leu Thr Met  
 165 170 175  
 Ala Gly Ile Phe Asp Cys Trp Glu Pro Pro Glu Gly Gly Asp Val Leu  
 180 185 190  
 Tyr Ser Tyr Thr Ile Ile Thr Val Asp Ser Cys Lys Gly Leu Ser Asp  
 195 200 205  
 Ile His His Arg Met Pro Ala Ile Leu Asp Gly Glu Glu Ala Val Ser

210	215	220
Lys Trp Leu Asp Phe Gly Glu Val Ser Thr Gln Glu Ala Leu Lys Leu		
225	230	235
Ile His Pro Thr Glu Asn Ile Thr Phe His Ala Val Ser Ser Val Val		240
	245	250
Asn Asn Ser Arg Asn Asn Thr Pro Glu Cys Leu Ala Pro Val Asp Leu		255
	260	265
Val Val Lys Lys Glu Leu Arg Ala Ser Gly Ser Ser Gln Arg Met Leu		270
	275	280
Gln Trp Leu Ala Thr Lys Ser Pro Lys Lys Glu Asp Ser Lys Thr Pro		285
	290	295
Gln Lys Glu Glu Ser Asp Val Pro Gln Trp Ser Ser Gln Phe Leu Gln		300
305	310	315
Lys Ser Pro Leu Pro Thr Lys Arg Gly Thr Ala Gly Leu Leu Glu Gln		320
	325	330
Trp Leu Lys Arg Glu Lys Glu Glu Glu Pro Val Ala Lys Arg Pro Tyr		335
	340	345
		350
Ser Gln		

&lt;210&gt; 4399

&lt;211&gt; 723

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4399

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120

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180

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480

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540

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600

gagatcgagt tcctgaggct gcagggtgctg gagcagcagc acgtcattga cgacctctca  
660

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720

aag

723

&lt;210&gt; 4400

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gctggattgt gctaccgacg ctcaatatcc atgcaccccg gatctggaag actttgcccgg
300

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&lt;210&gt; 4402

&lt;211&gt; 252

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4402

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		20						25					30		
Thr	Ala	Arg	Lys	Ser	Ile	Thr	Val	Ile	Cys	Asp	Phe	Tyr	Ser	Leu	Ile
		35					40					45			
Arg	Leu	His	Phe	Ile	Pro	Arg	Leu	Gly	Ser	Arg	Ala	Asp	Leu	Ile	Lys
	50					55				60					
Gln	Tyr	Gly	Arg	Trp	Ala	Val	Val	Ser	Gly	Ala	Thr	Asp	Gly	Ile	Gly
65				70					75					80	
Lys	Ala	Tyr	Ala	Glu	Leu	Ala	Ser	Arg	Gly	Leu	Asn	Ile	Ile	Leu	
			85					90					95		
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		115					120					125			
Gly	Arg	Glu	Ile	Tyr	Leu	Pro	Ile	Arg	Glu	Ala	Leu	Lys	Asp	Lys	Asp
	130					135					140				
Val	Gly	Ile	Leu	Val	Asn	Asn	Val	Gly	Val	Phe	Tyr	Pro	Tyr	Pro	Gln

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			165						170					175	
Asn	Ile	Ala	Ala	Ala	Ser	Leu	Met	Val	His	Val	Val	Leu	Pro	Gly	Met
		180						185					190		
Val	Glu	Arg	Lys	Lys	Gly	Ala	Ile	Val	Thr	Ile	Ser	Ser	Gly	Leu	Leu
	195						200					205			
Leu	Gln	Pro	Thr	Pro	Gln	Leu	Ala	Ala	Phe	Ser	Ala	Ser	Lys	Ala	Tyr
	210					215					220				
Leu	Asp	His	Phe	Ser	Arg	Ala	Leu	Gln	Tyr	Glu	Tyr	Ala	Ser	Lys	Gly
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Ile	Phe	Val	Gln	Ser	Leu	Xaa	Pro	Phe	Tyr	Val	Ala				
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&lt;210&gt; 4403

&lt;211&gt; 4237

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4403

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1020

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4237



<210> 4404  
 <211> 779  
 <212> PRT  
 <213> Homo sapiens

<400> 4404  
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 Gly Met Met Pro Asn Gly Gln Asp Met Ser Thr Met Glu Ser Gly Pro  
 35 40 45  
 Asn Asn His Gly Asn Phe Gln Gly Asp Ser Asn Phe Asn Arg Met Trp  
 50 55 60  
 Gln Pro Glu Trp Gly Met His Gln Gln Pro Pro His Pro Pro Pro Asp  
 65 70 75 80  
 Gln Pro Trp Met Pro Pro Thr Pro Gly Pro Met Asp Ile Val Pro Pro  
 85 90 95  
 Ser Glu Asp Ser Asn Ser Gln Asp Ser Gly Glu Phe Ala Pro Asp Asn  
 100 105 110  
 Arg His Ile Phe Asn Gln Asn Asn His Asn Phe Gly Gly Pro Pro Asp  
 115 120 125  
 Asn Phe Ala Val Gly Pro Val Asn Gln Phe Asp Tyr Gln His Gly Ala  
 130 135 140  
 Ala Phe Gly Pro Pro Gln Gly Gly Phe His Pro Pro Tyr Trp Gln Pro  
 145 150 155 160  
 Gly Pro Pro Gly Pro Pro Ala Pro Pro Gln Asn Arg Arg Glu Arg Pro  
 165 170 175  
 Ser Ser Phe Arg Asp Arg Gln Arg Ser Pro Ile Ala Leu Pro Val Lys  
 180 185 190  
 Gln Glu Pro Pro Gln Ile Asp Ala Val Lys Arg Arg Thr Leu Pro Ala  
 195 200 205  
 Trp Ile Arg Glu Gly Leu Glu Lys Met Glu Arg Glu Lys Gln Lys Lys  
 210 215 220  
 Leu Glu Lys Glu Arg Met Glu Gln Gln Arg Ser Gln Leu Ser Lys Lys  
 225 230 235 240  
 Lys Lys Lys Ala Thr Glu Asp Ala Glu Gly Gly Asp Gly Pro Arg Leu  
 245 250 255  
 Pro Gln Arg Ser Lys Phe Asp Ser Asp Glu Glu Glu Glu Asp Thr Glu  
 260 265 270  
 Asn Val Glu Ala Ala Ser Ser Gly Lys Val Thr Arg Ser Pro Ser Pro  
 275 280 285  
 Val Pro Gln Glu Glu His Ser Asp Pro Glu Met Thr Glu Glu Glu Lys  
 290 295 300  
 Glu Tyr Gln Met Met Leu Leu Thr Lys Met Leu Leu Thr Glu Ile Leu  
 305 310 315 320  
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 325 330 335  
 Arg Lys Ala Thr Lys Ala Pro Ala Lys Gln Leu Ala Gln Ser Ser Ala  
 340 345 350  
 Leu Ala Ser Leu Thr Gly Leu Gly Leu Gly Gly Tyr Gly Ser Gly  
 355 360 365  
 Asp Ser Glu Asp Glu Arg Ser Asp Arg Gly Ser Glu Ser Ser Asp Thr



370 375 380  
Asp Asp Glu Glu Leu Arg His Arg Ile Arg Gln Lys Gln Glu Ala Phe  
385 390 395 400  
Trp Arg Lys Glu Lys Glu Gln Gln Leu Leu His Asp Lys Gln Met Glu  
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Glu Glu Lys Gln Gln Thr Glu Arg Val Thr Lys Glu Met Asn Glu Phe  
420 425 430  
Ile His Lys Glu Gln Asn Ser Leu Ser Leu Leu Glu Ala Arg Glu Ala  
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Asp Gly Asp Val Val Asn Glu Lys Lys Arg Thr Pro Asn Glu Thr Thr  
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Ser Val Leu Glu Pro Lys Lys Glu His Lys Glu Lys Glu Lys Gln Gly  
465 470 475 480  
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485 490 495  
Arg Thr Ser Ser Thr Ser Ser Thr Val Ser Ser Ser Ser Tyr Ser Ser  
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Ser Ser Gly Ser Ser Arg Thr Ser Ser Arg Ser Ser Ser Pro Lys Arg  
515 520 525  
Lys Lys Arg His Ser Arg Ser Arg Ser Pro Thr Ile Lys Ala Arg Arg  
530 535 540  
Ser Arg Ser Arg Ser Tyr Ser Arg Arg Ile Lys Ile Glu Ser Asn Arg  
545 550 555 560  
Ala Arg Val Lys Ile Arg Asp Arg Arg Arg Ser Asn Arg Asn Ser Ile  
565 570 575  
Glu Arg Glu Arg Arg Arg Asn Arg Ser Pro Ser Arg Glu Arg Arg Arg  
580 585 590  
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610 615 620  
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625 630 635 640  
Lys Glu Arg Ser Arg Ser Ile Asp Lys Asp Arg Lys Lys Lys Asp Lys  
645 650 655  
Glu Arg Glu Arg Glu Gln Asp Lys Arg Lys Glu Lys Gln Lys Arg Glu  
660 665 670  
Glu Lys Asp Phe Lys Phe Ser Ser Gln Asp Asp Arg Leu Lys Arg Lys  
675 680 685  
Arg Glu Ser Glu Arg Thr Phe Ser Arg Ser Gly Ser Ile Ser Val Lys  
690 695 700  
Ile Ile Arg His Asp Ser Arg Gln Asp Ser Lys Lys Ser Thr Thr Lys  
705 710 715 720  
Asp Ser Lys Lys His Ser Gly Ser Asp Ser Ser Gly Arg Ser Ser Ser  
725 730 735  
Glu Ser Pro Gly Ser Ser Lys Glu Lys Lys Ala Lys Lys Pro Lys His  
740 745 750  
Ser Arg Ser Arg Ser Val Glu Lys Ser Gln Arg Ser Gly Lys Lys Ala  
755 760 765  
Ser Arg Lys His Lys Ser Lys Ser Arg Ser Arg  
770 775

&lt;210&gt; 4405

&lt;211&gt; 918

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4405

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&lt;210&gt; 4406

&lt;211&gt; 138

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4406

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Lys Glu Leu Tyr Asp His Ala Glu Ala Thr Ile Val Val Met Leu Val  
35 40 45  
Gly Asn Lys Ser Asp Leu Ser Gln Ala Arg Glu Val Pro Thr Glu Glu  
50 55 60  
Ala Arg Met Phe Ala Glu Asn Asn Gly Leu Leu Phe Leu Glu Thr Ser  
65 70 75 80  
Ala Leu Asp Ser Thr Asn Val Glu Leu Ala Phe Glu Thr Val Leu Lys

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Glu	Ile	Phe	Ala	Lys	Val	Ser	Lys	Gln	Arg	Gln	Asn	Ser	Ile	Arg	Thr		
			100					105					110				
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 <212> DNA  
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&lt;400&gt; 4408

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 Glu Ser Leu His Leu Phe Asn Ser Ile Cys Asn His Lys Tyr Phe Ser  
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 Pro Asn Thr Phe Glu Asp Ala Gly Asn Tyr Ile Lys Asn Gln Phe Leu  
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&lt;210&gt; 4409

&lt;211&gt; 4217

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4409

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<210> 4410

<211> 405

<212> PRT

<213> Homo sapiens

<400> 4410

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Ser	His	Met	Ala	Thr	Arg	Ser	Arg	Glu	Asn	Ala	Arg	Arg	Arg	Gly	Thr
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Pro	Glu	Pro	Glu	Glu	Ala	Gly	Arg	Arg	Gly	Gly	Lys	Arg	Pro	Lys	Pro
	50					55					60				
Pro	Pro	Gly	Val	Ala	Ser	Ala	Ser	Ala	Arg	Gly	Pro	Pro	Ala	Thr	Asp
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Gly	Leu	Gly	Ala	Lys	Val	Lys	Leu	Glu	Glu	Lys	Gln	His	His	Pro	Cys
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Lys	Phe	Ser	Cys	Glu	Ile	Cys	Glu	Lys	Lys	Phe	Tyr	Thr	Met	Ala	His
		180					185						190		
Val	Arg	Lys	His	Met	Val	Ala	His	Thr	Lys	Asp	Met	Pro	Phe	Thr	Cys
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Glu	Arg	Phe	Gln	Tyr	Lys	Tyr	Gln	Leu	Arg	Ser	His	Met	Ser	Ile	His
			245					250						255	
Ile	Gly	His	Lys	Gln	Phe	Met	Cys	Gln	Trp	Cys	Gly	Lys	Asp	Phe	Asn
		260					265						270		
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	275						280					285			
Pro	Phe	Ile	Cys	Glu	Ile	Cys	Gly	Lys	Ser	Phe	Thr	Ser	Arg	Pro	Asn
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Met	Lys	Arg	His	Arg	Arg	Thr	His	Thr	Gly	Glu	Lys	Pro	Tyr	Pro	Cys



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305          310          315          320
Asp Val Cys Gly Gln Arg Phe Arg Phe Ser Asn Met Leu Lys Ala His
          325          330          335
Lys Glu Lys Cys Phe Arg Val Ser His Thr Leu Ala Gly Asp Gly Val
          340          345          350
Pro Ala Ala Pro Gly Leu Pro Pro Thr Gln Pro Gln Ala His Ala Leu
          355          360          365
Pro Leu Leu Pro Gly Leu Pro Gln Thr Leu Pro Pro Pro Pro His Leu
          370          375          380
Pro Pro Pro Pro Pro Leu Phe Pro Thr Thr Ala Ser Pro Gly Gly Arg
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Met Asn Ala Asn Asn
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<210> 4411  
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 <212> DNA  
 <213> Homo sapiens

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<210> 4412  
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 <213> Homo sapiens

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Ala Gln Ala Val Cys Pro Leu Phe Ser Ser Trp Cys Pro Ala Pro Pro
35          40          45
Arg Cys His Leu Pro Gln Trp Gln Trp Gly Phe Ile Thr Gly Ser Ser
50          55          60
Gly Pro Leu Pro Met Ala Gly Gly Val Pro Gly Gly Pro Asn Gln Ala

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<210> 4413
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<212> DNA
<213> Homo sapiens
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<210> 4414

<211> 65  
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<400> 4414  
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                     20                    25                    30  
 Lys Leu Glu Glu Lys Thr Ala His Ser Ser Leu Ala Leu Phe Arg Asp  
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 Asp Thr Gly Val Lys Tyr Gly Leu Val Gly Leu Glu Pro Thr Lys Val  
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 Pro  
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<210> 4415  
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 <212> DNA  
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<210> 4416  
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&lt;400&gt; 4416

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Cys Phe Lys Ile Ser Ser Asp Ile Tyr Leu Val Lys Phe His Phe Arg
      20           25           30
Arg Leu Arg Cys Arg Thr Leu Met Phe Ile Thr Ser Ser Tyr Pro Lys
      35           40           45
Arg Asn Gly Phe Arg His Val Leu Ser Gln Gln Glu Ile Asp Phe Phe
      50           55           60
Leu Asn Tyr Leu Ile Leu Leu Pro Asn Ile Thr Glu Val Met Arg Ser
65           70           75           80
Leu Val Thr Phe Gly Cys Cys Ala Leu Lys Glu Pro Gly Leu Glu Phe
      85           90           95
Val Gly Val Ile
      100

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&lt;210&gt; 4417

&lt;211&gt; 980

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4417

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<210> 4418  
<211> 263  
<212> PRT  
<213> Homo sapiens

<400> 4418  
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Glu Val Met Arg Glu Met Thr Lys Lys Leu Tyr Ser Gln Tyr Glu Glu  
35 40 45  
Lys Leu Gln Glu Glu Gln Arg Lys His Ser Ala Glu Lys Glu Ala Leu  
50 55 60  
Leu Glu Glu Thr Asn Ser Phe Leu Lys Ala Ile Glu Glu Ala Asn Lys  
65 70 75 80  
Lys Met Gln Ala Ala Glu Ile Ser Leu Glu Glu Lys Asp Gln Arg Ile  
85 90 95  
Gly Glu Leu Asp Arg Leu Ile Glu Arg Met Glu Lys Glu Arg His Gln  
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Gln Lys Lys Val Lys Gln Met Val Glu Glu Ile Glu Ser Leu Lys Lys  
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210 215 220  
Val Gly Cys Asp Leu Leu Pro Ser Pro Thr Gly Arg Thr Arg Glu Ile  
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<212> DNA  
<213> Homo sapiens

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 35 40 45  
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&lt;210&gt; 4424

&lt;211&gt; 768

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4424

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Ser	Gly	Asp	Glu	Glu	Glu	Glu	Gly	Pro	Ile	Val	Leu	Gly	Arg	Arg	Gln
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Lys	Ala	Leu	Gly	Lys	Asn	Arg	Ser	Ala	Asp	Phe	Asn	Pro	Asp	Phe	Val
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Phe	Thr	Glu	Lys	Glu	Gly	Thr	Tyr	Asp	Gly	Ser	Trp	Ala	Leu	Ala	Asp
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Lys	Ser	Gly	Lys	Leu	Glu	Lys	Glu	Lys	Glu	Ala	Lys	Glu	Gly	Ser	Glu



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Lys Gly Gln Glu Ala Gly Gly Phe Phe Glu Asp Ala Ser Gln Tyr Asp  
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Glu Asn Leu Ser Phe Gln Asp Met Asn Leu Ser Arg Pro Leu Leu Lys  
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Glu Val Lys Asp Leu Ala Ser Val Ser Leu Lys Asn Pro Val Arg Ile  
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&lt;210&gt; 4425

&lt;211&gt; 5199

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4425

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5199

&lt;210&gt; 4426

&lt;211&gt; 1116

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4426

Met Ala Ala Met Ala Pro Ala Leu Thr Asp Ala Ala Ala Glu Ala His

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His Ile Arg Phe Lys Leu Ala Pro Pro Ser Ser Thr Leu Ser Pro Gly			
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Ser Ala Glu Asn Asn Gly Asn Ala Asn Ile Leu Ile Ala Ala Asn Gly			
35	40	45	
Thr Lys Arg Lys Ala Ile Ala Ala Glu Asp Pro Ser Leu Asp Phe Arg			
50	55	60	
Asn Asn Pro Thr Lys Glu Asp Leu Gly Lys Leu Gln Pro Leu Val Ala			
65	70	75	80
Ser Tyr Leu Cys Ser Asp Val Thr Ser Val Pro Ser Lys Glu Ser Leu			
85	90	95	
Lys Leu Gln Gly Val Phe Ser Lys Gln Thr Val Leu Lys Ser His Pro			
100	105	110	
Leu Leu Ser Gln Ser Tyr Glu Leu Arg Ala Glu Leu Leu Gly Arg Gln			
115	120	125	
Pro Val Leu Glu Phe Ser Leu Glu Asn Leu Arg Thr Met Asn Thr Ser			
130	135	140	
Gly Gln Thr Ala Leu Pro Gln Ala Pro Val Asn Gly Leu Ala Lys Lys			
145	150	155	160
Leu Thr Lys Ser Ser Thr His Ser Asp His Asp Asn Ser Thr Ser Leu			
165	170	175	
Asn Gly Gly Lys Arg Ala Leu Thr Ser Ser Ala Leu His Gly Gly Glu			
180	185	190	
Met Gly Gly Ser Glu Ser Gly Asp Leu Lys Gly Gly Met Thr Asn Cys			
195	200	205	
Thr Leu Pro His Arg Ser Leu Asp Val Glu His Thr Thr Leu Tyr Ser			
210	215	220	
Asn Asn Ser Thr Ala Asn Lys Ser Phe Val Asn Ser Met Glu Gln Pro			
225	230	235	240
Ala Leu Gln Gly Ser Ser Arg Leu Ser Pro Gly Thr Asp Ser Ser Ser			
245	250	255	
Asn Leu Gly Gly Val Lys Leu Glu Gly Lys Lys Ser Pro Leu Ser Ser			
260	265	270	
Ile Leu Phe Ser Ala Leu Asp Ser Asp Thr Arg Ile Thr Ala Leu Leu			
275	280	285	
Arg Arg Gln Ala Asp Ile Glu Ser Arg Ala Arg Arg Leu Gln Lys Arg			
290	295	300	
Leu Gln Val Val Gln Ala Lys Gln Val Glu Arg His Ile Gln His Gln			
305	310	315	320
Leu Gly Gly Phe Leu Glu Lys Thr Leu Ser Lys Leu Pro Asn Leu Glu			
325	330	335	
Ser Leu Arg Pro Arg Ser Gln Leu Met Leu Thr Arg Lys Ala Glu Ala			
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Ala Leu Arg Lys Ala Ala Ser Glu Thr Thr Thr Ser Glu Gly Leu Ser			
355	360	365	
Asn Phe Leu Lys Ser Asn Ser Ile Ser Glu Glu Leu Glu Arg Phe Thr			
370	375	380	
Ala Ser Gly Ile Ala Asn Leu Arg Cys Ser Glu Gln Ala Phe Asp Ser			
385	390	395	400
Asp Val Thr Asp Ser Ser Ser Gly Gly Glu Ser Asp Ile Glu Glu Glu			
405	410	415	
Glu Leu Thr Arg Ala Asp Pro Glu Gln Arg His Val Pro Leu Arg Arg			
420	425	430	
Arg Ser Glu Trp Lys Trp Ala Ala Asp Arg Ala Ala Ile Val Ser Arg			

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Trp Asn Trp Leu Gln Ala His Val Ser Asp Leu Glu Tyr Arg Ile Arg  
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Gln Gln Thr Asp Ile Tyr Lys Gln Ile Arg Ala Asn Lys Gly Leu Ile  
465 470 475 480  
Val Leu Gly Glu Val Pro Pro Pro Glu His Thr Thr Asp Leu Phe Leu  
485 490 495  
Pro Leu Ser Ser Glu Val Lys Thr Asp His Gly Thr Asp Lys Leu Ile  
500 505 510  
Glu Ser Val Ser Gln Pro Leu Glu Asn His Gly Ala Pro Ile Ile Gly  
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His Ile Ser Glu Ser Leu Ser Thr Lys Ser Cys Gly Ala Leu Arg Pro  
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Val Asn Gly Val Ile Asn Thr Leu Gln Pro Val Leu Ala Asp His Ile  
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Pro Gly Asp Ser Ser Asp Ala Glu Glu Gln Leu His Lys Lys Gln Arg  
565 570 575  
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595 600 605  
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Pro Gly Cys Asp Val Asn Pro Ser Cys Ala Leu Cys Gly Ser Gly Ser  
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Asp Asp Val Pro Thr Ser Leu His Phe Gln Ser Met Leu Lys Ser Gln  
675 680 685  
Trp Gln Asn Lys Pro Phe Asp Lys Ile Lys Pro Pro Lys Lys Leu Ser  
690 695 700  
Leu Lys His Arg Ala Pro Met Pro Gly Ser Leu Pro Asp Ser Ala Arg  
705 710 715 720  
Lys Asp Arg His Lys Leu Val Ser Ser Phe Leu Thr Thr Ala Lys Leu  
725 730 735  
Ser His His Gln Thr Arg Pro Asp Arg Thr His Arg Gln His Leu Asp  
740 745 750  
Asp Val Gly Ala Val Pro Met Val Glu Arg Val Thr Ala Pro Lys Ala  
755 760 765  
Glu Arg Leu Leu Asn Pro Pro Pro Pro Val His Asp Pro Asn His Ser  
770 775 780  
Lys Met Arg Leu Arg Asp His Ser Ser Glu Arg Ser Glu Val Leu Lys  
785 790 795 800  
His His Thr Asp Met Ser Ser Ser Ser Tyr Leu Ala Ala Thr His His  
805 810 815  
Pro Pro His Ser Pro Leu Val Arg Gln Leu Ser Thr Ser Ser Asp Ser  
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Pro Ala Pro Ala Ser Ser Ser Ser Gln Val Thr Ala Ser Thr Ser Gln  
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850 855 860  
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 Ser Arg Ser Tyr Arg Ser Ser Asp Gly Arg Thr Thr Pro Gln Leu Gly  
 945                      950                      955                      960  
 Ser Ala Asn Pro Ser Thr Pro Gln Pro Ala Ser Pro Asp Val Ser Ser  
                                  965                      970                      975  
 Ser His Ser Leu Ser Glu Tyr Ser His Gly Gln Ser Pro Arg Ser Pro  
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 Ile Ser Pro Glu Leu His Ser Ala Pro Leu Thr Pro Val Ala Arg Asp  
                                  995                      1000                      1005  
 Thr Leu Arg His Leu Ala Ser Glu Asp Thr Arg Cys Ser Thr Pro Glu  
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 Leu Gly Leu Asp Glu Gln Ser Val Gln Pro Trp Glu Arg Arg Thr Phe  
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 Pro Leu Ala His Ser Pro Gln Ala Glu Cys Glu Asp Gln Leu Asp Ala  
                                  1045                      1050                      1055  
 Gln Glu Arg Ala Ala Arg Cys Thr Arg Arg Thr Ser Gly Ser Lys Thr  
                                  1060                      1065                      1070  
 Xaa Pro Gly Asp Arg Gly Ser Ala His Leu Ala Ser His Cys Pro Pro  
                                  1075                      1080                      1085  
 Gln Glu Ser Ala Ser Gly Gly Ser Ser His Ser Ser Ala Pro Asp Ser  
                                  1090                      1095                      1100  
 Gln Met Ser Gly Arg Gln Pro Ser Lys Gln Thr His  
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&lt;210&gt; 4427

&lt;211&gt; 4474

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4427

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&lt;210&gt; 4428

&lt;211&gt; 763

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4428

Met	Val	Ala	Cys	Arg	Ala	Ile	Gly	Ile	Leu	Ser	Arg	Phe	Ser	Ala	Phe	1	5	10	15
Arg	Ile	Leu	Arg	Ser	Arg	Gly	Tyr	Ile	Cys	Arg	Asn	Phe	Thr	Gly	Ser	20	25	30	
Ser	Ala	Leu	Leu	Thr	Arg	Thr	His	Ile	Asn	Tyr	Gly	Val	Lys	Gly	Asp	35	40	45	
Val	Ala	Val	Val	Arg	Ile	Asn	Ser	Pro	Asn	Ser	Lys	Val	Asn	Thr	Leu	50	55	60	
Ser	Lys	Glu	Leu	His	Ser	Glu	Phe	Ser	Glu	Val	Met	Asn	Glu	Ile	Trp	65	70	75	80
Ala	Ser	Asp	Gln	Ile	Arg	Ser	Ala	Val	Leu	Ile	Ser	Ser	Lys	Pro	Gly	85	90	95	
Cys	Phe	Ile	Ala	Gly	Ala	Asp	Ile	Asn	Met	Leu	Ala	Ala	Cys	Lys	Thr	100	105	110	
Leu	Gln	Glu	Val	Thr	Gln	Leu	Ser	Gln	Glu	Ala	Gln	Arg	Ile	Val	Glu	115	120	125	
Lys	Leu	Glu	Lys	Ser	Thr	Lys	Pro	Ile	Val	Ala	Ala	Ile	Asn	Gly	Ser	130	135	140	
Cys	Leu	Gly	Gly	Gly	Leu	Glu	Val	Ala	Ile	Ser	Cys	Gln	Tyr	Arg	Ile	145	150	155	160
Ala	Thr	Lys	Asp	Arg	Lys	Thr	Val	Leu	Gly	Thr	Pro	Glu	Val	Leu	Leu				

3622

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Glu	Arg	Phe	Gly	Gly	Gly	Asn
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Lys	Gly	Phe	Leu	Gly	Arg	Lys
625			630		635	640
Glu	Gly	Val	Lys	Arg	Lys	Asp
	645		650		655	
Ala	Ser	Leu	Lys	Leu	Pro	Pro
	660		665		670	
Ile	Gln	Phe	Arg	Leu	Val	Thr
	675		680		685	
Leu	Gln	Glu	Gly	Ile	Leu	Ala
690			695		700	
Val	Phe	Gly	Leu	Gly	Phe	Pro
705			710		715	720
Val	Asp	Leu	Tyr	Gly	Ala	Gln
	725		730		735	
Glu	Ala	Ala	Tyr	Gly	Lys	Gln
	740		745		750	
His	Ala	Asn	Ser	Pro	Asn	Lys
	755		760			

<210> 4429  
 <211> 981  
 <212> DNA  
 <213> Homo sapiens

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 720  
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 780

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 900  
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 981

<210> 4430  
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 <212> PRT  
 <213> Homo sapiens

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 Ser Ala Leu Pro Gln Val Asn Thr Arg Arg Glu Ser Leu Asn Arg Gln  
 35 40 45  
 Ala Pro Gln Pro Arg Arg Lys Pro Ser Phe Gln Thr Val Gly Ile Pro  
 50 55 60  
 Phe Ile Pro Trp His Arg Glu Pro Lys Gly Met Gln Thr Asp Pro Gly  
 65 70 75 80  
 Arg Ala Leu His Ser Gln Thr Leu Ala Arg Thr Arg Arg Leu Gly Ala  
 85 90 95  
 Pro Arg Arg Ala Leu Pro Pro Arg Pro Pro Pro Pro Ala Asp Ser Pro  
 100 105 110  
 Leu Cys Glu Leu Asn His Leu Gly Ala Met Cys Arg Gly Arg Ala Ser  
 115 120 125  
 Ala Ser Glu Val Leu Gly Gly Pro Val Thr Ala Ser Arg Phe Tyr Gly  
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<210> 4431  
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 <212> DNA  
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Leu Ser His Leu Asn Leu His Gln Asn Cys Leu Met Thr Leu His Ile
65                70                75                80
Arg Glu His Glu Pro Pro Gly Ala Leu Thr Glu Leu Asp Leu Ser His
                85                90                95
Asn Gln Leu Ser Glu Leu His Leu Ala Pro Gly Leu Ala Ser Cys Leu
                100                105                110
Gly Ser Leu Arg Leu Phe Asn Leu Ser Ser Asn Gln Leu Leu Gly Val
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Pro Pro Gly Leu Phe Ala Asn Ala Arg Asn Ile Thr Thr Leu Asp Met
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Ser His Asn Gln Ile
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&lt;210&gt; 4435

&lt;211&gt; 783

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4435

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240
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300
gttcacatta cagacttcaa catagcgacg gtagtgaaag gagcagaaag ggcttcctcc
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420
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cta
783

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&lt;210&gt; 4436



<211> 261  
 <212> PRT  
 <213> Homo sapiens

<400> 4436  
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 20 25 30  
 Asp Glu Glu Asp Met Phe Met Val Val Asp Leu Leu Leu Gly Gly Asp  
 35 40 45  
 Leu Arg Tyr His Leu Gln Gln Asn Val His Phe Thr Glu Gly Thr Val  
 50 55 60  
 Lys Leu Tyr Ile Cys Glu Leu Ala Leu Ala Leu Glu Tyr Leu Gln Arg  
 65 70 75 80  
 Tyr His Ile Ile His Arg Asp Ile Lys Pro Asp Asn Ile Leu Leu Asp  
 85 90 95  
 Glu His Gly His Val His Ile Thr Asp Phe Asn Ile Ala Thr Val Val  
 100 105 110  
 Lys Gly Ala Glu Arg Ala Ser Ser Met Ala Gly Thr Lys Pro Tyr Met  
 115 120 125  
 Ala Pro Glu Val Phe Gln Val Tyr Met Asp Arg Gly Pro Gly Tyr Ser  
 130 135 140  
 Tyr Pro Val Asp Trp Trp Ser Leu Gly Ile Thr Ala Tyr Glu Leu Leu  
 145 150 155 160  
 Arg Gly Trp Arg Pro Tyr Glu Ile His Ser Val Thr Pro Ile Asp Glu  
 165 170 175  
 Ile Leu Asn Met Phe Lys Val Glu Arg Val His Tyr Ser Ser Thr Trp  
 180 185 190  
 Cys Lys Gly Met Val Ala Leu Leu Arg Lys Leu Leu Thr Lys Asp Pro  
 195 200 205  
 Glu Ser Arg Val Ser Ser Leu His Asp Ile Gln Ser Val Pro Tyr Leu  
 210 215 220  
 Ala Asp Met Asn Trp Asp Ala Val Phe Lys Lys Ala Leu Met Pro Gly  
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 Glu Glu Met Ile Leu  
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<210> 4437  
 <211> 620  
 <212> DNA  
 <213> Homo sapiens

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 gagaagctgc agcaggccgt gaggcagaac gggctcatgt cggggctgat gcagatgctg  
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<210> 4438  
 <211> 206  
 <212> PRT  
 <213> Homo sapiens

<400> 4438  
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 35 40 45  
 Ser Thr Leu Leu Arg Glu Ala Gln Glu Leu Ser Leu Glu Lys Leu Gln  
 50 55 60  
 Gln Ala Val Arg Gln Asn Gly Leu Met Ser Gly Leu Met Gln Met Leu  
 65 70 75 80  
 Leu Leu Lys Val Ser Ala His Ile Thr Glu Gln Leu Gly Met Ala Pro  
 85 90 95  
 Gly Gly Glu Phe Arg Glu Ala Phe Lys Glu Ala Ser Lys Val Pro Phe  
 100 105 110  
 Cys Lys Phe His Leu Gly Asp Arg Pro Ile Pro Val Thr Phe Lys Arg  
 115 120 125  
 Ala Ile Ala Ala Leu Ser Phe Trp Gln Lys Val Arg Leu Ala Trp Gly  
 130 135 140  
 Leu Cys Phe Leu Ser Asp Pro Ile Ser Lys Asp Asp Val Glu Arg Cys  
 145 150 155 160  
 Lys Gln Lys Asp Leu Leu Glu Gln Met Met Ala Glu Met Ile Gly Glu  
 165 170 175  
 Phe Pro Asp Leu His Arg Thr Ile Val Ser Glu Arg Asp Val Tyr Leu  
 180 185 190  
 Thr Tyr Met Leu Arg Gln Ala Ala Arg Arg Leu Glu Leu Pro  
 195 200 205

<210> 4439  
 <211> 2121  
 <212> DNA  
 <213> Homo sapiens

<400> 4439

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tctaaaatta actttttattg ttagagacac atcttttagaa aagttttgtaa atatcaacat  
180  
ttaccatctt attttttctt ttgagaccaa gcatcacaga ccaaaagcca caaagtttac  
240  
aataatttat tattgttgca tgacatttgc cagtaaaata aattatagaa actatagagt  
300  
ctttataaac tattttgtat atcatattca ctccctaagt cttactgcag taactgtatg  
360  
aaatttaatt agattacgtt ttagcattag tcagaagatt taaaaaatat gtaaaatgtt  
420  
ttcacagtac tttggattta taaaagaccc cattatttta acttttgtgc aacctgtttg  
480  
aaatgtataa aaaacctttt acaaaccaaa aggtggcgta aggttttact gagttgctga  
540  
agacatctta ctttcttgaa tttctactta acatccatgt ggtgcacttt ttcaggcatt  
600  
gtaataagtg caaataaata atcaattatt gatttctaaa aatctatacc aatagacaat  
660  
actcaggctt ggaaatattt tgaacactca gatataaaaa ttcagtaaac aatttatgca  
720  
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780  
aaaaaaaaag ttcaacttcg atttaagtcc tagggcctga caaagtgacc ctggataaat  
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gcatcaatcc tttcctgcag ggacggaaga gttttcaaat ccttgctgaa agcattttgt  
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1080  
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1620

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 1680  
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 1740  
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 1800  
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 1860  
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 1920  
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 1980  
 aagcacattt tccaatacct gtggcatcac actactacca ctttttgaag aatcatcaaa  
 2040  
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&lt;210&gt; 4440

&lt;211&gt; 82

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4440

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Leu	Arg	Phe	Ala	Phe	Ile	Asp	Val	Gly	Ile	Phe	Arg	Asn	Ser	Ala	Pro
			20					25					30		
Arg	Leu	Ser	Met	Ile	Gly	Ala	Asp	Ser	Ser	Glu	Glu	Lys	Phe	Leu	Arg
		35					40					45			
Arg	Ile	Gly	Arg	Phe	Gly	Tyr	Gly	Tyr	Gly	Pro	Tyr	Gln	Pro	Val	Pro
	50					55				60					
Glu	Gln	Pro	Leu	Tyr	Pro	Gln	Pro	Tyr	Gln	Pro	Gln	Tyr	Gln	Gln	Tyr
65					70					75				80	
Thr	Phe														

&lt;210&gt; 4441

&lt;211&gt; 2055

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4441

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 240  
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1380  
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1860  
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1920

ggtgtacctt atgaacaacc agaagggcca gctgggtcaag aggctcgtgc ccgtggagca  
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 2040  
 caccggacca tgaca  
 2055

<210> 4442  
 <211> 517  
 <212> PRT  
 <213> Homo sapiens

<400> 4442  
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 20 25 30  
 Trp Lys Glu Lys Val Leu Trp Ala Leu Leu Ala Val Leu Leu Ala Ser  
 35 40 45  
 Trp Arg Leu Trp Ala Ile Lys Asp Phe Gln Glu Cys Thr Trp Gln Val  
 50 55 60  
 Val Leu Asn Glu Phe Lys Arg Val Gly Glu Ser Gly Val Ser Asp Ser  
 65 70 75 80  
 Phe Phe Glu Gln Glu Pro Val Asp Thr Val Ser Ser Leu Phe His Met  
 85 90 95  
 Leu Val Asp Ser Pro Ile Asp Pro Ser Glu Lys Tyr Leu Gly Phe Pro  
 100 105 110  
 Tyr Tyr Leu Lys Ile Asn Tyr Ser Cys Glu Glu Lys Pro Ser Glu Asp  
 115 120 125  
 Leu Val Arg Met Gly His Leu Thr Gly Leu Lys Pro Leu Val Leu Val  
 130 135 140  
 Thr Phe Gln Ser Pro Val Asn Phe Tyr Arg Trp Lys Ile Glu Gln Leu  
 145 150 155 160  
 Gln Ile Gln Met Glu Ala Ala Pro Phe Arg Ser Lys Gly Gly Pro Gly  
 165 170 175  
 Gly Gly Gly Arg Asp Arg Asn Leu Ala Gly Met Asn Ile Asn Gly Phe  
 180 185 190  
 Leu Lys Arg Asp Arg Asp Asn Asn Ile Gln Phe Thr Val Gly Glu Glu  
 195 200 205  
 Leu Phe Asn Leu Met Pro Gln Tyr Phe Val Gly Val Ser Ser Arg Pro  
 210 215 220  
 Leu Trp His Thr Val Asp Gln Ser Pro Val Leu Ile Leu Gly Gly Ile  
 225 230 235 240  
 Pro Asn Glu Lys Tyr Val Leu Met Thr Asp Thr Ser Phe Lys Asp Phe  
 245 250 255  
 Ser Leu Val Glu Val Asn Gly Val Gly Gln Met Leu Ser Ile Asp Ser  
 260 265 270  
 Cys Trp Val Gly Ser Phe Tyr Cys Pro His Ser Gly Phe Thr Ala Thr  
 275 280 285  
 Ile Tyr Asp Thr Ile Ala Thr Glu Ser Thr Leu Phe Ile Arg Gln Asn  
 290 295 300  
 Gln Leu Val Tyr Tyr Phe Thr Gly Thr Tyr Thr Thr Leu Tyr Glu Arg  
 305 310 315 320  
 Asn Arg Gly Ser Gly Glu Cys Ala Val Ala Gly Pro Thr Pro Gly Glu

325 330 335  
 Gly Thr Leu Val Asn Pro Ser Thr Glu Gly Ser Trp Ile Arg Val Leu  
 340 345 350  
 Ala Ser Glu Cys Ile Lys Lys Leu Cys Pro Val Tyr Phe His Ser Asn  
 355 360 365  
 Gly Ser Glu Tyr Ile Met Ala Leu Thr Thr Gly Lys His Glu Gly Tyr  
 370 375 380  
 Val His Phe Gly Thr Ile Arg Val Thr Thr Cys Ser Ile Ile Trp Ser  
 385 390 395 400  
 Glu Tyr Ile Ala Gly Glu Tyr Thr Leu Leu Leu Leu Val Glu Ser Gly  
 405 410 415  
 Tyr Gly Asn Ala Ser Lys Arg Phe Gln Val Val Ser Tyr Asn Thr Ala  
 420 425 430  
 Ser Asp Asp Leu Glu Leu Leu Tyr His Ile Pro Glu Phe Ile Pro Glu  
 435 440 445  
 Ala Arg Gly Leu Glu Phe Leu Met Ile Leu Gly Thr Glu Ser Tyr Thr  
 450 455 460  
 Ser Thr Ala Met Ala Pro Lys Gly Ile Phe Cys Asn Pro Tyr Asn Asn  
 465 470 475 480  
 Leu Ile Phe Ile Trp Gly Asn Phe Leu Leu Gln Arg Ser Gly Thr Ser  
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 Trp Arg Ala Ala Thr Gly Ser Thr Ser Cys Ser Leu Pro Arg Ala Gly  
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 Arg Cys Thr Ser Ala  
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<210> 4443  
 <211> 692  
 <212> DNA  
 <213> Homo sapiens

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 420  
 caagtgaccc gactgacgct gaagctcttg ggacagaagc tggagcaaga acggcagaac  
 480  
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 540  
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 600  
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cagccctgcc cccagagctg cccccacgc gt  
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<210> 4444  
<211> 108  
<212> PRT  
<213> Homo sapiens

<400> 4444  
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20 25 30  
Cys Glu Ala Ser Cys Lys Leu Asp Ser Leu Pro Ser Ala Pro Ser Pro  
35 40 45  
Lys Ala Gly Leu Gln Glu Val Arg Pro Ala Leu Gln Ala Thr Pro Val  
50 55 60  
Leu Gly Leu Leu Leu Ser Ser Ser Phe Leu Arg Val Thr Glu Pro Gly  
65 70 75 80  
Arg Glu Val Gly Cys Gly Leu Pro Cys Pro Tyr Ser His Leu Leu Gln  
85 90 95  
Leu Pro Pro Cys Trp Thr His Gln Gln Gln Ser Lys  
100 105

<210> 4445  
<211> 901  
<212> DNA  
<213> Homo sapiens

<400> 4445  
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120  
actcagctgt cccaggagt gccagaccc tcattcttat ccaggaccta ggagccctac  
180  
ccctggcctt ccctcatcag ccgtaaatga tgatttactg ctgttaccat catcactgcc  
240  
ttcagtgacc aagggccttc caagggtgcca gctctggaac gaaggatgcc cttgggaggt  
300  
gatgatactc aggtacacgg gtgctcaaca gattgcttcc tcctatcctc agacggtctt  
360  
tgcatgcatg cagccattgg cactcccatt gtgtggaagg aaaccagccc agggtcacac  
420  
agctggtcag cagcaacata gctgggtctca aatctaaggt gcctgaccat gcctccatga  
480  
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720



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 780  
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 900  
 a  
 901

<210> 4446  
 <211> 140  
 <212> PRT  
 <213> Homo sapiens

<400> 4446  
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 Lys Met Asp Leu Pro Pro Gly Asp Pro Gly Val Leu Pro Leu Ser Cys  
 20 25 30  
 Pro Gln Glu Cys Pro Asp Pro His Ser Tyr Pro Gly Pro Arg Ser Pro  
 35 40 45  
 Thr Pro Gly Leu Pro Ser Ser Ala Val Asn Asp Asp Leu Leu Leu Leu  
 50 55 60  
 Pro Ser Ser Leu Pro Ser Val Thr Lys Gly Leu Pro Arg Cys Gln Leu  
 65 70 75 80  
 Trp Asn Glu Gly Cys Pro Trp Glu Val Met Ile Leu Arg Tyr Thr Gly  
 85 90 95  
 Ala Gln Gln Ile Ala Ser Ser Tyr Pro Gln Thr Val Phe Ala Cys Met  
 100 105 110  
 Gln Pro Leu Ala Leu Pro Leu Cys Gly Arg Lys Pro Ala Gln Gly His  
 115 120 125  
 Thr Ala Gly Gln Gln Gln His Ser Trp Ser Gln Ile  
 130 135 140

<210> 4447  
 <211> 951  
 <212> DNA  
 <213> Homo sapiens

<400> 4447  
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 agccaggccc cagacaccgc actcagggcc atggccgaca ggggcccgtg gaggggtggg  
 120  
 gtggtgggct atggccgcct cggacagtcc cttgtgtccc gccttctggc tcagggatca  
 180  
 gaactgggccc tagaacttgt ttttgtgtgg aaccgtgacc ctggacgaat ggcagggagt  
 240  
 gtgccccctg ccttcagct cgaagacctc actacacttg aggaaaggca ccttgacctt  
 300  
 gtggtagaag tggcccatcc aaaaataatc catgaatctg gggtagaaat cctccgtcat  
 360  
 gcaaaccctc tgagccttcg tgtcaccatg gccacacacc ccgatggctt ccggcttgag  
 420

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780  
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840  
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951

&lt;210&gt; 4448

&lt;211&gt; 263

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4448

Arg	Cys	Pro	Lys	Ser	Ser	Gly	Cys	Pro	Gly	Leu	Val	Gln	Arg	Ala	Ala		
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Ser	Ser	Pro	Gly	Ser	Gln	Ala	Pro	Asp	Thr	Ala	Leu	Arg	Ala	Met	Ala		
			20					25					30				
Asp	Arg	Gly	Pro	Trp	Arg	Val	Gly	Val	Val	Gly	Tyr	Gly	Arg	Leu	Gly		
		35					40					45					
Gln	Ser	Leu	Val	Ser	Arg	Leu	Leu	Ala	Gln	Gly	Ser	Glu	Leu	Gly	Leu		
		50				55					60						
Glu	Leu	Val	Phe	Val	Trp	Asn	Arg	Asp	Pro	Gly	Arg	Met	Ala	Gly	Ser		
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Val	Pro	Pro	Ala	Leu	Gln	Leu	Glu	Asp	Leu	Thr	Thr	Leu	Glu	Glu	Arg		
				85						90				95			
His	Pro	Asp	Leu	Val	Val	Glu	Val	Ala	His	Pro	Lys	Ile	Ile	His	Glu		
			100					105					110				
Ser	Gly	Val	Gln	Ile	Leu	Arg	His	Ala	Asn	Leu	Leu	Ser	Leu	Arg	Val		
		115					120					125					
Thr	Met	Ala	Thr	His	Pro	Asp	Gly	Phe	Arg	Leu	Glu	Gly	Pro	Leu	Ala		
		130				135					140						
Ala	Ala	His	Ser	Pro	Gly	Pro	Cys	Thr	Val	Leu	Tyr	Glu	Gly	Pro	Val		
145					150					155				160			
Arg	Gly	Leu	Cys	Pro	Phe	Ala	Pro	Arg	Asn	Ser	Asn	Thr	Met	Ala	Ala		
			165					170					175				
Ala	Ala	Leu	Ala	Ala	Pro	Ser	Leu	Gly	Phe	Asp	Gly	Val	Ile	Gly	Val		
		180					185					190					
Leu	Val	Ala	Asp	Thr	Ser	Leu	Thr	Asp	Met	His	Val	Val	Asp	Val	Glu		
		195					200					205					
Leu	Ser	Gly	Pro	Arg	Gly	Pro	Thr	Gly	Arg	Ser	Phe	Ala	Val	His	Thr		
		210				215					220						
Arg	Arg	Glu	Asn	Pro	Ala	Glu	Pro	Gly	Ala	Val	Thr	Gly	Ser	Ala	Thr		

225		230		235		240									
Val	Thr	Ala	Phe	Trp	Arg	Ser	Leu	Leu	Ala	Cys	Cys	Gln	Leu	Pro	Ser
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Arg	Pro	Gly	Ile	His	Leu	Cys									
			260												

<210> 4449  
 <211> 1365  
 <212> DNA  
 <213> Homo sapiens

<400> 4449  
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 180  
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 300  
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 720  
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 960  
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 1020  
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 1080  
 gacaaccagt ttaatgaaga atcttttagaa cacgatgttc ttgatgataa tacagagcag  
 1140  
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 1200  
 tcagaggaac cagaggagaa acaagagact gagaatgagg aagcctcagt gattgaaacc  
 1260

aactccacag ttcctggagc tgattctatt cctgatcctg aactaagtgg agaatctttg  
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<210> 4450  
 <211> 194  
 <212> PRT  
 <213> Homo sapiens

<400> 4450  
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 Gly Pro Gln Asn Arg Tyr Ala Leu Ile Cys Gln Gln Cys Phe Ser His  
 35 40 45  
 Asn Gly Met Ala Leu Lys Glu Glu Phe Glu Tyr Ile Ala Phe Arg Cys  
 50 55 60  
 Ala Tyr Cys Phe Phe Leu Asn Pro Ala Arg Lys Thr Arg Pro Gln Ala  
 65 70 75 80  
 Pro Arg Leu Pro Glu Phe Ser Phe Glu Lys Arg Gln Val Val Glu Gly  
 85 90 95  
 Ser Ser Ser Val Gly Pro Leu Pro Ser Gly Ser Val Leu Ser Ser Asp  
 100 105 110  
 Asn Gln Phe Asn Glu Glu Ser Leu Glu His Asp Val Leu Asp Asp Asn  
 115 120 125  
 Thr Glu Gln Thr Asp Asp Lys Ile Pro Ala Thr Glu Gln Thr Asn Gln  
 130 135 140  
 Val Ile Glu Lys Ala Ser Asp Ser Glu Glu Pro Glu Glu Lys Gln Glu  
 145 150 155 160  
 Thr Glu Asn Glu Glu Ala Ser Val Ile Glu Thr Asn Ser Thr Val Pro  
 165 170 175  
 Gly Ala Asp Ser Ile Pro Asp Pro Glu Leu Ser Gly Glu Ser Leu Thr  
 180 185 190  
 Ala Glu

<210> 4451  
 <211> 1637  
 <212> DNA  
 <213> Homo sapiens

<400> 4451  
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 180  
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 240  
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420  
cctcgctttt gggccagccc tggctctgtc ttggccttgg cttggccagc ctggcctcct  
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tcaagatgga cccctaate tcttggcaga gcgggtttgt aacaggcact tttgatcttc  
540  
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600  
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720  
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780  
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960  
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1020  
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1200  
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1260  
ctagcacgaa ttgaggcctc tctgtcagtg cagatgtccc gtaggggccg ggcctgttt  
1320  
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1380  
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1440  
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1500  
ctggaggagg agcagaagca ggacaaagag aagccggagt aggagggagc gggtagaggg  
1560  
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1620  
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1637

&lt;210&gt; 4452

&lt;211&gt; 328

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4452

Met Gly Ala Ala Ala Ser Gln Cys Cys Val Ala Pro Ala Leu His Trp

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Arg Ala Val Pro Thr Leu Thr Ala Thr Xaa Ser Leu Ala Asp Leu Leu
      20           25           30
Lys Tyr Asn Phe Tyr Leu Pro Phe Phe Phe Gly Pro Ile Met Thr
      35           40           45
Phe Asp Arg Phe His Ala Gln Val Ser Gln Val Glu Pro Val Arg Arg
      50           55           60
Glu Gly Glu Leu Trp His Ile Arg Ala Gln Ala Gly Leu Ser Val Val
      65           70           75           80
Ala Ile Met Ala Val Asp Ile Phe Phe His Phe Phe Tyr Ile Leu Thr
      85           90           95
Ile Pro Ser Asp Leu Lys Phe Ala Asn Arg Leu Pro Asp Ser Ala Leu
      100          105          110
Ala Gly Leu Ala Tyr Ser Asn Leu Val Tyr Asp Trp Val Lys Ala Ala
      115          120          125
Val Leu Phe Gly Val Val Asn Thr Val Ala Cys Leu Asp His Leu Asp
      130          135          140
Pro Pro Gln Pro Pro Lys Cys Ile Thr Ala Leu Tyr Val Phe Ala Glu
      145          150          155          160
Thr His Phe Asp Arg Gly Ile Asn Asp Trp Leu Cys Lys Tyr Val Tyr
      165          170          175
Asn His Ile Gly Gly Glu His Ser Ala Val Ile Pro Glu Leu Ala Ala
      180          185          190
Thr Val Ala Thr Phe Ala Ile Thr Thr Leu Trp Leu Gly Pro Cys Asp
      195          200          205
Ile Val Tyr Leu Trp Ser Phe Leu Asn Cys Phe Gly Leu Asn Phe Glu
      210          215          220
Leu Trp Met Gln Lys Leu Ala Glu Trp Gly Pro Leu Ala Arg Ile Glu
      225          230          235          240
Ala Ser Leu Ser Val Gln Met Ser Arg Arg Val Arg Ala Leu Phe Gly
      245          250          255
Ala Met Asn Phe Trp Ala Ile Ile Met Tyr Asn Leu Val Ser Leu Asn
      260          265          270
Ser Leu Lys Phe Thr Glu Leu Val Ala Arg Arg Leu Leu Leu Thr Gly
      275          280          285
Phe Pro Gln Thr Thr Leu Ser Ile Leu Phe Val Thr Tyr Cys Gly Val
      290          295          300
Gln Leu Val Lys Glu Arg Glu Arg Thr Leu Ala Leu Glu Glu Glu Gln
      305          310          315          320
Lys Gln Asp Lys Glu Lys Pro Glu
      325

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&lt;210&gt; 4453

&lt;211&gt; 685

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4453

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120
gcacatctat acccactctg gctctgaaag gcttgtcaac caaaaatggg cagctggggc
180

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300  
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685

<210> 4454  
<211> 207  
<212> PRT  
<213> Homo sapiens

<400> 4454  
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Pro Gly Trp His Ile Tyr Thr His Ser Gly Ser Glu Arg Leu Val Asn  
20 25 30  
Gln Lys Trp Ala Ala Gly Ala Lys Ala Tyr Leu Asn Lys Gly Ser Lys  
35 40 45  
Gly Pro Leu Ser Leu Gly Ser Ser Ile Gln Pro Leu Ser Gln Gln Arg  
50 55 60  
Gln Asp Cys Gly Pro Leu Cys Phe Leu Asn Arg Ala Gln Gly Ser Gln  
65 70 75 80  
Gly Met Pro Ser Leu Gln His Ser Thr Leu Trp Ser Gln Trp Ser Arg  
85 90 95  
Arg Ser Ser Leu Lys Tyr Tyr Tyr Arg Gly Glu Arg Pro Ile Leu Ala  
100 105 110  
Met Leu Leu Tyr Leu Pro Arg Pro Lys Thr Val Leu Cys Ser Phe Ser  
115 120 125  
Cys Ser Glu Ile Arg Ser Gln Asn Ser Arg Arg His Ser Phe Gly Lys  
130 135 140  
Lys Gly His Ala Phe Val Leu Tyr Leu Ile Leu Val Ser Glu Ala Leu  
145 150 155 160  
Ile Pro Val Asp Cys Gly Leu Arg Trp Ser Pro Pro Gln Asp Pro Gln  
165 170 175  
Leu Gln Arg Gln Arg Arg Met Lys Glu Glu Gln Pro Pro Gln Asp Leu  
180 185 190  
Leu His Trp Glu Pro His Pro Thr Phe Ser Val Pro Phe Thr Arg  
195 200 205

<210> 4455  
<211> 882

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4455

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 480  
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 720  
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 780  
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 882

&lt;210&gt; 4456

&lt;211&gt; 261

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4456

Met	Lys	Asp	His	Asp	Ala	Ile	Lys	Leu	Phe	Ile	Gly	Gln	Ile	Pro	Arg
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Asn	Leu	Asp	Glu	Lys	Asp	Leu	Lys	Pro	Leu	Phe	Glu	Glu	Phe	Gly	Lys
			20					25					30		
Ile	Tyr	Glu	Leu	Thr	Val	Leu	Lys	Asp	Arg	Phe	Thr	Gly	Met	His	Lys
		35					40					45			
Gly	Cys	Ala	Phe	Leu	Thr	Tyr	Cys	Glu	Arg	Glu	Ser	Ala	Leu	Lys	Ala
	50					55				60					
Gln	Ser	Ala	Leu	His	Glu	Gln	Lys	Thr	Leu	Pro	Gly	Met	Asn	Arg	Pro
65				70					75					80	
Ile	Gln	Val	Lys	Pro	Ala	Asp	Ser	Glu	Ser	Arg	Gly	Asp	Ser	Ser	Cys
			85					90					95		
Leu	Arg	Gln	Pro	Pro	Ser	His	Arg	Lys	Leu	Phe	Val	Gly	Met	Leu	Asn



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          100          105          110
Lys Gln Gln Ser Glu Asp Asp Val Arg Arg Leu Phe Glu Ala Phe Gly
          115          120          125
Asn Ile Glu Glu Cys Thr Ile Leu Arg Gly Pro Asp Gly Asn Ser Lys
          130          135          140
Gly Cys Ala Phe Val Lys Tyr Ser Ser His Ala Glu Ala Gln Ala Ala
145          150          155          160
Ile Asn Ala Leu His Gly Ser Gln Thr Met Pro Gly Ala Ser Ser Ser
          165          170          175
Leu Val Val Lys Phe Ala Asp Thr Asp Lys Glu Arg Thr Met Arg Arg
          180          185          190
Met Gln Gln Met Ala Gly Gln Met Gly Met Phe Asn Pro Met Ala Ile
          195          200          205
Pro Phe Gly Ala Tyr Gly Ala Tyr Ala Gln Ala Leu Met Gln Gln Gln
          210          215          220
Ala Ala Leu Met Ala Ser Val Ala Gln Gly Gly Tyr Leu Asn Pro Met
225          230          235          240
Ala Ala Phe Ala Ala Ala Gln Met Gln Gln Met Ala Ala Leu Asn Met
          245          250          255
Asn Gly Leu Ala Ala
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<210> 4457  
 <211> 1491  
 <212> DNA  
 <213> Homo sapiens

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<400> 4457
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480
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540
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780

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 1491

&lt;210&gt; 4458

&lt;211&gt; 405

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4458

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Gln	Leu	Leu	Met	Tyr	Gln	Gln	His	Thr	Ser	His	Tyr	Asp	Leu	Glu	Arg
			20					25					30		
Lys	Gly	Gly	Tyr	Leu	Met	Leu	Ser	Phe	Ile	Asp	Phe	Cys	Pro	Phe	Ser
		35					40					45			
Val	Met	Arg	Leu	Arg	Ser	Leu	Pro	Ser	Pro	Gln	Arg	Tyr	Thr	Arg	Gln
	50					55					60				
Glu	Arg	Tyr	Arg	Ala	Arg	Pro	Pro	Arg	Val	Leu	Glu	Arg	Ser	Gly	Phe
65				70					75					80	
His	Asn	Glu	Asn	Ser	Leu	Ala	Ile	Tyr	Gln	Gly	Leu	Val	Tyr	Tyr	Leu
			85						90					95	
Leu	Trp	Leu	His	Ser	Val	Tyr	Asp	Lys	Asp	Tyr	Tyr	Phe	Phe	Leu	Ala
			100					105					110		
Ser	Asn	Trp	Arg	Ser	Ala	Gly	Gly	Val	Ser	Ile	Glu	Met	Asp	Ser	Tyr
		115					120					125			
Glu	Lys	Ile	Tyr	Asn	Leu	Glu	Ser	Ala	Tyr	Glu	Leu	Pro	Glu	Arg	Ile
	130					135					140				
Phe	Leu	Asp	Lys	Gly	Thr	Glu	Tyr	Ser	Phe	Ala	Ile	Phe	Leu	Ser	Ala
145				150					155					160	
Gln	Gly	His	Ser	Phe	Arg	Thr	Gln	Ser	Glu	Leu	Gly	Leu	Arg	Gly	Thr
			165						170				175		
Arg	Val	Glu	Pro	Glu	Gly	Arg	Gly	Glu	Gly	Tyr	Gln	Asn	Leu	Gly	Ala

180 185 190  
 Trp Gly Ala Gly Thr Pro Ser Glu Gly Arg Gly Leu Ser Val Asp Val  
 195 200 205  
 Gly Val Val Leu Ala Asp Pro Gly Cys Ile Glu Ala Ser Val Lys Gln  
 210 215 220  
 Glu Val Leu Ile Asn Arg Asn Ser Val Leu Phe Ser Ile Thr Leu Lys  
 225 230 235 240  
 Asp Lys Lys Leu Cys Tyr Asp Gln Gly Ile Ser Gly His His Leu Met  
 245 250 255  
 Glu Thr Ser Met Thr Val Asn Val Arg Ser Lys Pro Gly Gly Glu Gly  
 260 265 270  
 Lys Arg Leu Ala Phe Asp Ile Thr Tyr Thr Leu Glu Tyr Ser Arg Leu  
 275 280 285  
 Lys Asn Lys His Tyr Phe Asp Cys Val Asn Val Asn Pro Glu Met Pro  
 290 295 300  
 Cys Phe Leu Phe Arg Asp Ser Val Tyr Val Leu Leu Val Val Gly Gly  
 305 310 315 320  
 Gly Pro Thr Leu Asp Ser Leu Lys Asp Tyr Ser Glu Asp Glu Ile Tyr  
 325 330 335  
 Arg Phe Asn Ser Pro Leu Asp Lys Thr Asn Ser Leu Ile Trp Thr Thr  
 340 345 350  
 Arg Thr Thr Arg Thr Thr Lys Asp Ser Ala Phe His Ile Met Ser His  
 355 360 365  
 Glu Ser Pro Gly Ile Glu Trp Leu Cys Leu Glu Asn Ala Pro Cys Tyr  
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 Asp Asn Val Pro Gln Gly Ile Phe Ala Pro Glu Phe Phe Phe Lys Val  
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 Leu Val Ser Asn Arg  
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<210> 4459  
 <211> 1114  
 <212> DNA  
 <213> Homo sapiens

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 240  
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 480  
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1114

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<212> PRT  
<213> Homo sapiens

<400> 4460  
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35 40 45  
Leu Ser Pro Gly Ser Ala Arg Gly Ala Arg Gly Glu Asn Gln Pro Arg  
50 55 60  
Ser Arg Gly Arg Ala Ala Asn Gly Arg Ala Pro Pro Gly Pro Leu Thr  
65 70 75 80  
Arg Arg Leu Ala Gly Arg Ala Arg Thr Pro Arg Pro Lys Trp Leu Phe  
85 90 95  
Gln Gly Ala Ser Gln Ala Gly Glu Leu Gly Lys Gln Arg Arg Met Pro  
100 105 110  
Gly Leu Val Lys Arg Val Arg Asp Val  
115 120

<210> 4461  
<211> 488  
<212> DNA  
<213> Homo sapiens

<400> 4461  
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120

tacctggcag acttccccaa ggaactgtcc atcaaataca tggccagatc gttccgtggg  
 180  
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 240  
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 360  
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 488

<210> 4462  
 <211> 96  
 <212> PRT  
 <213> Homo sapiens

<400> 4462  
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 Ser Ser Asn Lys Glu Asn Phe Ile Tyr Leu Ala Asp Phe Pro Lys Glu  
 35 40 45  
 Leu Ser Ile Lys Tyr Met Ala Arg Ser Phe Arg Gly Ala Val Ala Ile  
 50 55 60  
 Val Thr Glu Thr Glu Glu Val Gly Cys Pro Ala Leu Leu Pro Ile Pro  
 65 70 75 80  
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<210> 4463  
 <211> 2662  
 <212> DNA  
 <213> Homo sapiens

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 300  
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 420

ctgggcggtg aggaaggcgt ctcccggtac tacgcagacc ccaccaagag gctggagctg  
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 2662

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 <211> 519  
 <212> PRT  
 <213> Homo sapiens

<400> 4464  
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 20 25 30  
 Val Arg Asp Val Ala Lys Met Leu Pro Thr Leu Gly Gly Glu Glu Gly  
 35 40 45  
 Val Ser Arg Ile Tyr Ala Asp Pro Thr Lys Arg Leu Glu Leu Tyr Phe  
 50 55 60  
 Arg Pro Lys Asp Pro Tyr Cys His Pro Val Cys Ala Asn Arg Phe Ser  
 65 70 75 80  
 Thr Ser Ser Leu Leu Leu Arg Ile Arg Lys Arg Thr Arg Arg Gln Lys  
 85 90 95  
 Gly Val Leu Gly Thr Glu Ala His Ser Glu Val Thr Phe Asp Met Glu  
 100 105 110  
 Ile Leu Gly Ile Ile Ser Thr Ile Tyr Lys Phe Gln Gly Met Ser Asp  
 115 120 125  
 Phe Gln Tyr Leu Ala Val His Thr Glu Ala Gly Gly Lys His Thr Ser  
 130 135 140  
 Met Tyr Asp Lys Val Leu Met Leu Arg Pro Glu Lys Glu Ala Phe Phe  
 145 150 155 160  
 His Gln Glu Leu Pro Leu Tyr Ile Pro Pro Pro Ile Phe Ser Arg Leu  
 165 170 175  
 Asp Ala Pro Val Asp Tyr Phe Tyr Arg Pro Glu Thr Gln His Arg Glu  
 180 185 190  
 Gly Tyr Asn Asn Pro Pro Ile Ser Gly Glu Asn Leu Ile Gly Leu Ser

195	200	205
Arg Ala Arg Arg Pro His Asn Ala Ile Phe Val Asn Phe Glu Asp Glu		
210	215	220
Glu Val Pro Lys Gln Pro Leu Glu Ala Ala Ala Gln Thr Trp Arg Arg		
225	230	235
Val Cys Thr Asn Pro Val Asp Arg Lys Val Glu Glu Glu Leu Arg Lys		
245	250	255
Leu Phe Asp Ile Arg Pro Ile Trp Ser Arg Asn Ala Val Lys Ala Asn		
260	265	270
Ile Ser Val His Pro Asp Lys Leu Lys Val Leu Leu Pro Phe Ile Ala		
275	280	285
Tyr Tyr Met Ile Thr Gly Pro Trp Arg Ser Leu Trp Ile Arg Phe Gly		
290	295	300
Tyr Asp Pro Arg Lys Asn Pro Asp Ala Lys Ile Tyr Gln Val Leu Asp		
305	310	315
Phe Arg Ile Arg Cys Gly Met Lys His Gly Tyr Ala Pro Ser Asp Leu		
325	330	335
Pro Val Lys Ala Lys Arg Ser Thr Tyr Asn Tyr Ser Leu Pro Ile Thr		
340	345	350
Val Lys Lys Thr Ser Ser Gln Leu Val Thr Met His Asp Leu Lys Gln		
355	360	365
Gly Leu Gly Arg Ser Gly Thr Ser Gly Ala Arg Lys Pro Ala Ser Ser		
370	375	380
Lys Tyr Lys Leu Lys Asp Ser Val Tyr Ile Phe Arg Glu Gly Ala Leu		
385	390	395
Pro Pro Tyr Arg Gln Met Phe Tyr Gln Leu Cys Asp Leu Asn Val Glu		
405	410	415
Glu Leu Gln Lys Ile Ile His Arg Asn Asp Gly Ala Glu Asn Ser Cys		
420	425	430
Thr Glu Arg Asp Gly Trp Cys Leu Pro Lys Thr Ser Asp Glu Leu Arg		
435	440	445
Asp Thr Met Ser Leu Met Ile Arg Gln Thr Ile Arg Ser Lys Arg Pro		
450	455	460
Ala Leu Phe Ser Ser Ser Ala Lys Ala Asp Gly Gly Lys Glu Gln Leu		
465	470	475
Thr Tyr Glu Ser Gly Glu Asp Glu Glu Asp Glu Glu Glu Glu Glu		
485	490	495
Glu Glu Glu Asp Phe Lys Pro Ser Asp Gly Ser Glu Asn Glu Met Glu		
500	505	510
Thr Glu Ile Leu Asp Tyr Val		
515		

&lt;210&gt; 4465

&lt;211&gt; 1291

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4465

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ngcgccgtgg ggctagtga cgccgtgaag gccaccgacc agtactgcgc ccgcctccgc  
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 480  
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 1200  
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 1291

&lt;210&gt; 4466

&lt;211&gt; 93

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4466

Gly	Leu	Glu	Arg	Gln	Val	Arg	Ala	Glu	Ile	Glu	His	Lys	Lys	Glu	Glu
1				5				10						15	
Leu	Arg	Gln	Met	Val	Gly	Glu	Arg	Tyr	Arg	Asp	Leu	Ile	Glu	Ala	Xaa
			20					25					30		
Asp	Thr	Ile	Gly	Gln	Met	Arg	Arg	Xaa	Ala	Val	Gly	Leu	Val	Asp	Ala
		35					40					45			
Val	Lys	Ala	Thr	Asp	Gln	Tyr	Cys	Ala	Arg	Leu	Arg	Gln	Ala	Gly	Ser
	50					55					60				
Ala	Ala	Pro	Arg	Pro	Pro	Arg	Ala	Gln	Gln	Pro	Gln	Gln	Pro	Ser	Gln

65                      70                      75  
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<210> 4467
<211> 1142
<212> DNA
<213> Homo sapiens
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420  
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1142

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<210> 4468
<211> 170
<212> PRT
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&lt;213&gt; Homo sapiens

&lt;400&gt; 4468

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 Lys Glu His Leu Ser Gln Leu Glu Ser Pro Val Val Phe Cys His Asn  
 20 25 30  
 Asp Leu Leu Cys Lys Asn Ile Ile Tyr Asp Ser Ile Lys Gly His Val  
 35 40 45  
 Arg Phe Ile Asp Tyr Glu Tyr Ala Gly Tyr Asn Tyr Gln Ala Phe Asp  
 50 55 60  
 Ile Gly Asn His Phe Asn Glu Phe Ala Gly Val Asn Glu Val Asp Tyr  
 65 70 75 80  
 Cys Leu Tyr Pro Ala Arg Glu Thr Gln Leu Gln Trp Leu His Tyr Tyr  
 85 90 95  
 Leu Gln Ala Gln Lys Gly Met Ala Val Thr Pro Arg Glu Val Gln Arg  
 100 105 110  
 Leu Tyr Val Gln Val Asn Lys Phe Ala Leu Ala Ser His Phe Phe Trp  
 115 120 125  
 Ala Leu Trp Ala Leu Ile Gln Asn Gln Tyr Ser Thr Ile Asp Phe Asp  
 130 135 140  
 Phe Leu Arg Tyr Ala Val Ile Arg Phe Asn Gln Tyr Phe Lys Val Lys  
 145 150 155 160  
 Pro Gln Ala Ser Ala Leu Glu Met Pro Lys  
 165 170

&lt;210&gt; 4469

&lt;211&gt; 409

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4469

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 180  
 gtgctttaga ggcttcctgc gagccttggt tttgaagctt taacaggcct ccctcccatc  
 240  
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 300  
 tcacaatttc aggaaaatgg ctaccctgtg aggagagaaa gccacccaat gatgctgata  
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 409

&lt;210&gt; 4470

&lt;211&gt; 55

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4470

Ile Tyr Asp Ala Gln His Ala Asn Leu Ala Gly Thr Leu Ser Gly His

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Ala Ser Trp Val Leu Asn Val Ala Phe Cys Pro Asp Asp Thr His Phe			
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Val Ser Arg Ser Gln Cys Trp Ser Gly Leu Gly Trp Pro Arg Gln Leu			
	35	40	45
Glu Ser Arg Arg Trp Thr Thr			
50	55		

&lt;210&gt; 4471

&lt;211&gt; 1771

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4471

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180
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 <212> PRT  
 <213> Homo sapiens

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 Phe Gly Glu Gly Leu Leu Glu Ala Glu Leu Ala Ala Leu Cys Pro Thr  
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 Thr Leu Ala Pro Tyr Tyr Leu Arg Ala Pro Ser Val Ala Leu Pro Val  
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 Ala Gln Val Pro Thr Asp Pro Gly His Phe Ser Val Leu Leu Asp Val  
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 Lys His Phe Ser Pro Glu Glu Ile Ala Val Lys Val Val Gly Glu His  
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 <212> DNA  
 <213> Homo sapiens

<400> 4473

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&lt;210&gt; 4474

&lt;211&gt; 305

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4474

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		20						25					30		
Glu	Thr	Val	Val	Thr	Gly	Ser	Leu	Asp	Asp	Leu	Val	Lys	Val	Trp	Lys

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 Trp Arg Asp Glu Arg Leu Asp Leu Gln Trp Ser Leu Glu Gly His Gln  
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 Leu Gly Val Val Ser Val Asp Ile Ser His Thr Leu Pro Ile Ala Ala  
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 Ser Ser Ser Leu Asp Ala His Ile Arg Leu Trp Asp Leu Glu Asn Gly  
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 Lys Gln Met Lys Ser Ile Asp Ala Gly Pro Val Asp Ala Trp Thr Leu  
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 Ala Phe Ser Pro Asp Ser Gln His Leu Ala Thr Gly Thr His Met Gly  
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 Asp Thr Arg Gly Lys Phe Ile Leu Ser Ile Ala Tyr Ser Pro Asp Gly  
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 Lys Tyr Leu Ala Ser Gly Ala Ile Asp Gly Ile Ile Asn Ile Phe Asp  
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 Ala Gly Thr Leu Ser Gly His Ala Ser Trp Val Leu Asn Val Ala Phe  
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 Cys Pro Asp Asp Thr His Phe Val Ser Ser Ser Ser Asp Lys Ser Val  
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 Lys Val Trp Asp Val Gly Thr Arg Thr Cys Val His Thr Phe Phe Asp  
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 His Gln Asp Gln Val Trp Gly Val Lys Tyr Asn Gly Asn Gly Ser Lys  
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 <212> DNA  
 <213> Homo sapiens

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<212> PRT  
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<400> 4476  
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Ser Arg Arg Ser Ser Ser Ser Gln Pro Leu Pro Gln Ser Ala Arg Thr  
35 40 45  
Gly His Thr Glu Gly Ser Val Ala Leu His Gly Ser Pro Ala Ser Arg  
50 55 60  
Gln Thr Ser Gln Arg Trp Thr Val Cys Gln Gly Trp Asp Trp Asn Ser  
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Tyr Pro Leu Pro Ser Ser Arg Val His Ala  
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<211> 1153  
<212> DNA  
<213> Homo sapiens

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 <211> 118  
 <212> PRT  
 <213> Homo sapiens

<400> 4478  
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 35 40 45  
 Trp Glu Gly Asn Met Lys Glu Glu Asn Asn Asn Glu Ser Lys Ser Thr  
 50 55 60  
 Ser Ile Pro Gly His Phe Ile His Phe Gln Asp Tyr Cys Ala Pro Ile  
 65 70 75 80  
 Ser Thr Leu Met Val Cys Val Asp Thr Ala Gln Gly Cys Ile Ser Leu  
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<210> 4479  
 <211> 2158  
 <212> DNA  
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 <212> PRT  
 <213> Homo sapiens

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 35 40 45  
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 Val Arg Gly Pro Glu Met Thr Pro Tyr Glu Gly Gly Tyr Tyr His Gly  
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 Lys Leu Ile Phe Pro Arg Glu Phe Pro Phe Lys Pro Pro Ser Ile Tyr  
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 130 135 140  
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 145 150 155 160  
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 165 170 175  
 Thr Leu Gly Ser Ile Glu Thr Ser Asp Phe Thr Lys Arg Gln Leu Ala  
 180 185 190  
 Val Gln Ser Leu Ala Phe Asn Leu Lys Asp Lys Val Phe Cys Glu Leu  
 195 200 205  
 Phe Pro Glu Val Val Glu Glu Ile Lys Gln Lys Gln Lys Ala Gln Asp  
 210 215 220  
 Glu Leu Ser Ser Arg Pro Gln Thr Leu Pro Leu Pro Asp Val Val Pro  
 225 230 235 240  
 Asp Gly Glu Thr His Leu Val Gln Asn Gly Ile Gln Leu Leu Asn Gly  
 245 250 255  
 His Ala Pro Gly Ala Val Pro Asn Leu Ala Gly Leu Gln Gln Ala Asn  
 260 265 270  
 Arg His His Gly Leu Leu Gly Gly Ala Leu Ala Asn Leu Phe Val Ile

	275		280		285										
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 <212> DNA  
 <213> Homo sapiens

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<210> 4482  
 <211> 101  
 <212> PRT  
 <213> Homo sapiens

<400> 4482  
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 Trp Gly Leu Gly Thr Ser Cys Cys Ala Ala Arg Lys Gln Asp Ser Ala  
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 Cys Pro Pro Thr Trp Gly Gly Asp Pro Gly Leu Gly Phe Val Gly Ala  
 35 40 45  
 Ser Arg Thr Pro Asp Phe Trp Gly Val Pro Asp Ser Arg Gly Gly Pro  
 50 55 60  
 Arg Ala Gly Leu Gly His Val Gln Ser Leu Ile Asp Leu Cys Pro Phe  
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<210> 4483  
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 <212> DNA  
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1852

&lt;210&gt; 4484

&lt;211&gt; 452

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4484

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Thr	Asp	Leu	Thr	Ser	Ser	Ile	Pro	Lys	Pro	Leu	Leu	Pro	Val	Gly	Asn
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Lys	Pro	Leu	Ile	Trp	Tyr	Pro	Leu	Asn	Leu	Leu	Glu	Arg	Val	Gly	Phe
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Ala	Glu	Phe	Lys	Met	Lys	Met	Lys	Pro	Asp	Ile	Val	Cys	Ile	Pro	Asp
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		100					105					110			
Ala	Leu	His	Glu	Val	Val	Asp	Leu	Phe	Arg	Ala	Tyr	Asp	Ala	Ser	Leu
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Ala	Met	Leu	Met	Arg	Lys	Gly	Gln	Asp	Ser	Ile	Glu	Pro	Val	Pro	Gly
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Gln	Lys	Gly	Lys	Lys	Lys	Ala	Val	Glu	Gln	Arg	Asp	Phe	Ile	Gly	Val
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Asp	Glu	Glu	Leu	Val	Ile	Lys	Gly	Ser	Ile	Leu	Gln	Lys	His	Pro	Arg
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Arg	Ser	Glu	Leu	Ile	Pro	Tyr	Leu	Val	Arg	Lys	Gln	Phe	Ser	Ser	Ala
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			245					250					255		
Glu	Leu	Lys	Ser	Leu	Asp	Ile	Tyr	Ser	Phe	Ile	Lys	Glu	Ala	Asn	Thr
		260					265				270				
Leu	Asn	Leu	Ala	Pro	Tyr	Asp	Ala	Cys	Trp	Asn	Ala	Cys	Arg	Gly	Asp
	275					280					285				
Arg	Trp	Glu	Asp	Leu	Ser	Arg	Ser	Gln	Val	Arg	Cys	Tyr	Val	His	Ile
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Met	Lys	Glu	Gly	Leu	Cys	Ser	Arg	Val	Ser	Thr	Leu	Gly	Leu	Tyr	Met
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Glu	Ala	Asn	Arg	Gln	Val	Pro	Lys	Leu	Leu	Ser	Ala	Leu	Cys	Pro	Glu

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 Lys Gly Ala Asp Ile Lys Asp Cys Leu Ile Gly Ser Gly Gln Arg Ile  
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 <211> 513  
 <212> DNA  
 <213> Homo sapiens

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<210> 4486  
 <211> 100  
 <212> PRT  
 <213> Homo sapiens

<400> 4486  
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 Ser Ile Ser Leu Pro Ser Gly Ala Pro Gly Gly Gln Gly Asp Leu Leu

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Pro Gln Ala Val Pro His Leu Ile Pro Lys Val Ser Ser Asn Glu Val
      50              55              60
Asp Ser Phe Lys Tyr Trp Trp Phe Trp Leu Ala Arg Val Ser Glu Gly
      65              70              75              80
Thr Glu Lys Thr Pro Lys Cys Arg Val Cys Asp Thr Ala Gln Ser Ser
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Pro Met Pro Asn
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 <213> Homo sapiens

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240
tataagactg gcatcaagaa agctcctatt cagacatatg tgcttgggtgc taataaccag
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<210> 4488  
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 <213> Homo sapiens

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20     25     30
Leu Leu Ala Cys Gly Asp Val Glu Gly Lys Phe Asp Ile Leu Phe Asn
35     40     45
Arg Val Gln Ala Ile Gln Lys Lys Ser Gly Asn Phe Asp Leu Leu Leu
50     55     60
Cys Val Gly Asn Phe Phe Gly Ser Thr Gln Asp Ala Glu Trp Glu Glu
65     70     75     80
Tyr Lys Thr Gly Ile Lys Lys Ala Pro Ile Gln Thr Tyr Val Leu Gly
85     90     95
Ala Asn Asn Gln Glu Thr Val Lys Tyr Phe Gln Asp Ala Asp Gly Cys
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Glu Leu Ala Glu Asn Ile Thr Tyr Leu Gly Arg Lys Gly Ile Phe Thr
115    120    125
Gly

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<210> 4489  
<211> 2390  
<212> DNA  
<213> Homo sapiens

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gagccagggtg cctatatctt tctccagaac cccccaggtc tgcctagcat tgctgtctgc  
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&lt;210&gt; 4490

&lt;211&gt; 383

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4490

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			20					25					30		
Leu	Leu	Trp	Lys	Leu	Met	Trp	Arg	Glu	Pro	Gly	Ala	Tyr	Ile	Phe	Leu
		35					40					45			
Gln	Asn	Pro	Pro	Gly	Leu	Pro	Ser	Ile	Ala	Val	Cys	Trp	Phe	Val	Gly
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Cys	Leu	Cys	Gly	Ser	Lys	Leu	Val	Ile	Asp	Trp	His	Asn	Tyr	Gly	Tyr
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Ser	Ile	Met	Gly	Leu	Val	His	Gly	Pro	Asn	His	Pro	Leu	Val	Leu	Leu
			85					90					95		
Ala	Lys	Trp	Tyr	Glu	Lys	Phe	Phe	Gly	Arg	Leu	Ser	His	Leu	Asn	Leu

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 Arg Ala Val Thr Val Tyr Asp Lys Pro Ala Ser Phe Phe Lys Glu Thr  
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 Pro Leu Asp Leu Gln His Arg Leu Phe Met Lys Leu Gly Ser Met His  
 145 150 155 160  
 Ser Pro Phe Arg Ala Arg Ser Glu Pro Glu Asp Pro Val Thr Glu Arg  
 165 170 175  
 Ser Ala Phe Thr Glu Arg Asp Ala Gly Ser Gly Leu Val Thr Arg Leu  
 180 185 190  
 Arg Glu Arg Pro Ala Leu Leu Val Ser Ser Thr Ser Trp Thr Glu Asp  
 195 200 205  
 Glu Asp Phe Ser Ile Leu Leu Ala Ala Leu Glu Lys Phe Glu Gln Leu  
 210 215 220  
 Thr Leu Asp Gly His Asn Leu Pro Ser Leu Val Cys Val Ile Thr Gly  
 225 230 235 240  
 Lys Gly Pro Leu Arg Glu Tyr Tyr Ser Arg Leu Ile His Gln Lys His  
 245 250 255  
 Phe Gln His Ile Gln Val Cys Thr Pro Trp Leu Glu Ala Glu Asp Tyr  
 260 265 270  
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 275 280 285  
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 Cys Leu Pro Val Cys Ala Val Asn Phe Lys Cys Leu His Glu Leu Val  
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&lt;210&gt; 4492

&lt;211&gt; 674

&lt;212&gt; PRT



&lt;213&gt; Homo sapiens

&lt;400&gt; 4492

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 <213> Homo sapiens

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&lt;210&gt; 4494

&lt;211&gt; 111

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4494

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Gly Pro Ala Ile Lys Ala Leu Ser Leu Ser Thr Phe Trp Tyr Leu Val
      65           70           75           80
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&lt;211&gt; 3623

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4495

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<210> 4498  
 <211> 280  
 <212> PRT  
 <213> Homo sapiens

<400> 4498  
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 Pro Lys Ala Ser Thr Thr Ser Asp Gly Asp Glu Ser Pro Pro Ser Ser  
 35 40 45  
 Pro Gly Asn Pro Val Gln Gly Gln Cys Gly Glu Glu Glu Asp Ser Leu



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65      70      75      80
Trp Pro Leu Ser Ala Arg Arg Glu Lys Gly Leu Asn Gln Glu Pro Gln
      85      90      95
Gly Arg Gly Leu Ala Leu Gln Lys Met Gly Gln Glu Glu Glu Ser Pro
      100      105      110
Pro Arg Glu Glu Arg Pro Gln Gln Ser Pro Lys Ala Ser Pro Gly Leu
      115      120      125
Leu Ala Ala Ala Leu Gln Gln Ser Gln Glu Leu Ala Lys Leu Gly Thr
      130      135      140
Ser Phe Ala Gln Asn Gly Phe Tyr His Glu Ala Val Val Leu Phe Thr
145      150      155      160
Gln Ala Leu Lys Leu Asn Pro Gln Asp His Arg Leu Phe Gly Asn Arg
      165      170      175
Ser Phe Cys His Glu Arg Leu Gly Gln Pro Ala Trp Ala Leu Ala Asp
      180      185      190
Ala Gln Val Ala Leu Thr Leu Arg Pro Gly Trp Pro Arg Gly Leu Phe
      195      200      205
Arg Leu Gly Lys Ala Leu Met Gly Leu Gln Arg Phe Arg Glu Ala Ala
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Ala Val Phe Gln Glu Thr Leu Arg Gly Gly Ser Gln Pro Asp Ala Ala
225      230      235      240
Arg Glu Leu Arg Ser Cys Leu Leu His Leu Thr Leu Gln Gly Gln Arg
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Gly Gly Ile Cys Ala Pro Pro Leu Ser Pro Gly Ala Leu Gln Pro Leu
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&lt;210&gt; 4499

&lt;211&gt; 562

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4499

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<212> PRT  
<213> Homo sapiens

<400> 4500  
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Ser Leu Cys Gly Asp Trp Leu Gln Gly Leu His Arg Phe Val Ala Arg  
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<211> 1866  
<212> DNA  
<213> Homo sapiens

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 1866

&lt;210&gt; 4502

&lt;211&gt; 267

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4502

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Phe	Asp	Glu	Thr	Ile	Val	Asp	Glu	Asn	Ser	Asp	Asp	Ser	Ile	Val	Arg
		35					40					45			
Ala	Ala	Pro	Gly	Gln	Arg	Leu	Pro	Glu	Ser	Leu	Arg	Ala	Thr	Tyr	Arg
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<211> 250

<212> PRT

<213> Homo sapiens

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 180 185 190  
 Glu Leu Asp Glu Arg Glu Arg Glu Glu Phe Tyr Arg Leu Lys Lys Ile  
 195 200 205  
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&lt;210&gt; 4505

&lt;211&gt; 379

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4505

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 379

&lt;210&gt; 4506

&lt;211&gt; 121

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4506

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Arg Arg Gln Trp Trp Leu Trp Leu Ser Ser Leu Ser Asn Gln Ile His
      35           40           45
Pro Thr Pro Ser Ala Gln Gly Gln Ala Ala Leu Arg Gln Thr Cys Pro
      50           55           60
His Leu Arg Glu Ser Gly Pro Leu Ser Val Arg His Val Ala Leu Leu
65           70           75           80
Ala Leu Glu Thr Ala Ser His Pro Ser Gly Pro His Thr Asn Gln Ala
      85           90           95
Pro Ser Pro Ala Thr Ser Pro Lys Cys Pro Ser Glu Pro Ala Thr Pro
      100          105          110
Ser Ser Thr Asp Ser Leu Ile Lys Ile
      115          120

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&lt;210&gt; 4507

&lt;211&gt; 3664

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4507

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&lt;210&gt; 4508

&lt;211&gt; 172

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4508

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His	Asp	Leu	Arg	Asn	Ile	Phe	Gln	Arg	Phe	Gly	Glu	Ile	Val	Asp	Ile
	50				55					60					
Asp	Ile	Lys	Lys	Val	Asn	Gly	Val	Pro	Gln	Tyr	Ala	Phe	Leu	Gln	Tyr



65 70 75 80  
Cys Asp Ile Ala Ser Val Cys Lys Ala Ile Lys Lys Met Asp Gly Glu  
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Tyr Leu Gly Asn Asn Arg Leu Lys Leu Gly Phe Gly Lys Ser Met Pro  
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Thr Asn Cys Val Trp Leu Asp Gly Leu Ser Ser Asn Val Ser Asp Gln  
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Tyr Leu Thr Arg His Phe Cys Arg Tyr Gly Pro Val Val Lys Val Val  
130 135 140  
Phe Asp Arg Leu Lys Gly Met Ala Leu Val Leu Tyr Asn Glu Ile Glu  
145 150 155 160  
Tyr Ala Gln Ala Ala Val Lys Glu Thr Lys Gly Arg Lys Ile Gly Gly  
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Gln Asp Arg Thr Tyr Tyr Glu Ser Val Arg Thr Pro Gly Thr Tyr Pro  
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245 250 255  
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260 265 270  
Asp Pro Arg Glu Tyr Arg Asp Tyr Arg Asn Asp Pro Tyr Glu Gln Asp  
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Pro Arg Tyr Glu Lys Leu Asp Lys Ser Arg Leu Glu Arg Tyr Thr Lys  
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Asn Glu Lys Thr Asp Lys Glu Arg Thr Phe Asp Pro Glu Arg Val Glu  
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Arg Glu Arg Arg Leu Ile Arg Lys Glu Lys Val Glu Lys Asp Lys Thr  
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Lys Ala Lys Leu Asp Asn Asp Thr Val Lys Ser Ser Ala Leu Asp Gln

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Lys	Leu	Gln	Val	Ser	Gln	Thr	Glu	Pro	Ala	Lys	Ser	Asp	Leu	Ser	Lys		
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Ser	Gly	Ser	Arg	Pro	Ser	Ser	Asp	Leu	Gln	Ala	Arg	Leu	Gly	Glu	Leu		
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Ala	Gly	Glu	Ser	Val	Glu	Asn	Gln	Glu	Val	Gln	Ser	Lys	Lys	Pro	Ile		
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Pro	Ser	Lys	Pro	Gln	Leu	Lys	Gln	Leu	Gln	Val	Leu	Asp	Asp	Gln	Gly		
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Glu Gly Leu Ala Pro Glu Asp Arg Asp Lys Pro Ala His Gln Ala Ser

1795 1800 1805  
 Glu Thr Glu Leu Ala Ala Ala Ile Gly Ser Ile Ile Asn Asp Ile Ser  
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 Ser Ala Gly Pro Thr Asp Thr Lys Glu Ala Arg Gly Asn Ser Ser Glu  
 1890 1895 1900  
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 1905 1910 1915 1920  
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 1955 1960 1965  
 Gly Thr Thr Val Gln His Pro Glu Ala Pro Gln Glu Glu Lys Gln Ser  
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 Lys Ile Pro Ser Thr Glu Asn Ser Ser Gln Glu Ile Ser Val Glu Glu  
 2005 2010 2015  
 Arg Thr Pro Thr Lys Ala Ser Val Pro Pro Asp Leu Pro Pro Pro Pro  
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Val Thr Thr Leu Lys Ser Leu Val Ser Thr Pro Ala Gly Pro Val Asn  
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Val Leu Lys Gly Pro Val Asn Val Leu Thr Gly Pro Val Asn Val Leu  
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Thr Thr Pro Val Asn Ala Thr Val Gly Thr Val Asn Ala Ala Pro Gly  
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<213> Homo sapiens

<400> 4512

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			20					25					30		
Glu	Glu	Met	Thr	Pro	Thr	Ser	Val	Ile	Pro	Lys	Leu	Pro	Gln	Cys	Leu
		35					40					45			
Arg	Glu	Glu	Glu	Glu	Lys	Glu	Ser	Asp	Ser	Asp	Ser	Glu	Gly	Pro	Ile
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Gln	Tyr	Arg	Asp	Glu	Glu	Asp	Glu	Asp	Glu	Ser	Tyr	Gln	Ser	Ala	Leu
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Ala	Asn	Lys	Val	Lys	Arg	Lys	Asp	Thr	Leu	Ala	Met	Lys	Leu	Asn	His
			85					90					95		
Arg	Pro	Ser	Glu	Pro	Glu	Leu	Asn	Leu	Asn	Ser	Trp	Pro	Cys	Lys	Ser
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Lys	Glu	Glu	Trp	Asn	Glu	Ile	Arg	His	Gln	Ile	Gly	Asn	Thr	Leu	Ile
		115				120						125			
Arg	Arg	Leu	Ser	Gln	Arg	Pro	Thr	Pro	Glu	Glu	Leu	Glu	Gln	Arg	Asn
		130				135					140				
Ile	Leu	Gln	Pro	Lys	Asn	Glu	Ala	Asp	Arg	Gln	Ala	Glu	Lys	Arg	Glu
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			165					170					175		
Glu	Leu	Leu	Ala	Arg	Lys	Ile	Leu	Arg	Phe	Asn	Glu	Tyr	Val	Glu	Val
			180					185					190		
Thr	Asp	Ala	Gln	Asp	Tyr	Asp	Arg	Arg	Ala	Asp	Lys	Pro	Trp	Thr	Lys

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Leu	Thr	Pro	Ala	Asp	Lys	Ala	Ala	Ile	Arg	Lys	Glu	Leu	Asn	Glu	Phe
	210					215					220				
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Tyr	His	Arg	Pro												

<210> 4513  
 <211> 545  
 <212> DNA  
 <213> Homo sapiens

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<210> 4514  
 <211> 122  
 <212> PRT  
 <213> Homo sapiens

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 35 40 45  
 Ile Met Lys Met Ile Ser Ala Thr Glu Gly Pro Val Lys Ala Arg Glu  
 50 55 60  
 Val Gln Lys Phe Thr Glu Asp Leu Val Gly Ser Val Val His Val Leu  
 65 70 75 80  
 Ser His Arg Gln Glu Leu Arg Gly Trp Thr Gly Lys Glu Ala Pro Gly  
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<210> 4515  
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<210> 4516

<211> 901

<212> PRT

<213> Homo sapiens

<400> 4516

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Leu	Gly	Gly	Ser	Val	Arg	Leu	Gly	Ala	Leu	Leu	Pro	Arg	Ala	Pro	Leu	35	40	45	
Ala	Arg	Ala	Arg	Ala	Arg	Ala	Ala	Leu	Ala	Arg	Ala	Ala	Leu	Ala	Pro	50	55	60	
Arg	Leu	Pro	His	Asn	Leu	Ser	Leu	Glu	Leu	Val	Val	Ala	Ala	Pro	Pro	65	70	75	80
Ala	Arg	Asp	Pro	Ala	Ser	Leu	Thr	Arg	Gly	Leu	Cys	Gln	Ala	Leu	Val	85	90	95	
Pro	Pro	Gly	Val	Ala	Ala	Leu	Leu	Ala	Phe	Pro	Glu	Ala	Arg	Pro	Glu	100	105	110	
Leu	Leu	Gln	Leu	His	Phe	Leu	Ala	Ala	Ala	Thr	Glu	Thr	Pro	Val	Leu	115	120	125	
Ser	Leu	Leu	Arg	Arg	Glu	Ala	Arg	Ala	Pro	Leu	Gly	Ala	Pro	Asn	Pro	130	135	140	
Phe	His	Leu	Gln	Leu	His	Trp	Ala	Ser	Pro	Leu	Glu	Thr	Leu	Leu	Asp	145	150	155	160
Val	Leu	Val	Ala	Val	Leu	Gln	Ala	His	Ala	Trp	Glu	Asp	Val	Gly	Leu	165	170	175	
Ala	Leu	Cys	Arg	Thr	Gln	Asp	Pro	Gly	Gly	Leu	Val	Ala	Leu	Trp	Thr	180	185	190	
Ser	Arg	Ala	Gly	Arg	Pro	Pro	Gln	Leu	Val	Leu	Asp	Leu	Ser	Arg	Arg	195	200	205	
Asp	Thr	Gly	Asp	Ala	Gly	Leu	Arg	Ala	Arg	Leu	Ala	Pro	Met	Ala	Ala	210	215	220	
Pro	Val	Gly	Gly	Glu	Ala	Pro	Val	Pro	Ala	Ala	Val	Leu	Leu	Gly	Cys	225	230	235	240
Asp	Ile	Ala	Arg	Ala	Arg	Arg	Val	Leu	Glu	Ala	Val	Pro	Pro	Gly	Pro	245	250	255	
His	Trp	Leu	Leu	Gly	Thr	Pro	Leu	Pro	Pro	Lys	Ala	Leu	Pro	Thr	Ala	260	265	270	
Gly	Leu	Pro	Pro	Gly	Leu	Leu	Ala	Leu	Gly	Glu	Val	Ala	Arg	Pro	Pro	275	280	285	
Leu	Glu	Ala	Ala	Ile	His	Asp	Ile	Val	Gln	Leu	Val	Ala	Arg	Ala	Leu				

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Val Asn Cys Gly Asp Leu	Gln Pro Ala Gly Pro	Glu Ser Pro Gly Arg		
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Phe Leu Ala Arg Phe Leu	Ala Asn Thr Ser Phe	Gln Gly Arg Thr Gly		
	340	345		350
Pro Val Trp Val Thr Gly	Ser Ser Gln Val His	Met Ser Arg His Phe		
	355	360		365
Lys Val Trp Ser Leu Arg	Arg Asp Pro Arg Gly	Ala Pro Ala Trp Ala		
	370	375		380
Thr Val Gly Ser Trp Arg	Tyr Gly Gln Leu Asp	Leu Glu Pro Gly Gly		
385	390	395		400
Ala Ser Ala Trp Pro Pro	Pro Pro Gln Gly Ala	Gln Val Arg Pro Lys		
	405	410		415
Leu Arg Val Val Thr Leu	Leu Glu His Pro Phe	Val Phe Ala Arg Asp		
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Pro Asp Glu Asp Gly Gln	Cys Pro Ala Gly Gln	Leu Cys Leu Asp Pro		
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Gly Thr Asn Asp Ser Ala	Thr Leu Asp Ala Leu	Phe Ala Ala Leu Ala		
	450	455		460
Asn Gly Ser Ala Pro Arg	Ala Leu Arg Lys Cys	Cys Tyr Gly Tyr Cys		
465	470	475		480
Ile Asp Leu Leu Glu Arg	Leu Ala Glu Asp Thr	Pro Phe Asp Phe Glu		
	485	490		495
Leu Tyr Leu Val Gly Asp	Gly Lys Tyr Gly Ala	Leu Arg Asp Gly Arg		
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Trp Thr Gly Leu Val Gly	Asp Leu Leu Ala Gly	Arg Ala His Met Ala		
	515	520		525
Val Thr Ser Phe Ser Ile	Asn Ser Ala Arg Ser	Gln Val Val Asp Phe		
	530	535		540
Thr Ser Pro Phe Phe Ser	Thr Ser Leu Gly Ile	Met Val Arg Ala Arg		
545	550	555		560
Asp Thr Ala Ser Pro Ile	Gly Ala Phe Met Trp	Pro Leu His Trp Ser		
	565	570		575
Thr Trp Leu Gly Val Phe	Ala Ala Leu His Leu	Thr Ala Leu Phe Leu		
	580	585		590
Thr Val Tyr Glu Trp Arg	Ser Pro Tyr Gly Leu	Thr Pro Arg Gly Arg		
	595	600		605
Asn Arg Ser Thr Val Phe	Ser Tyr Ser Ser Ala	Leu Asn Leu Cys Tyr		
	610	615		620
Ala Ile Leu Phe Arg Arg	Thr Val Ser Ser Lys	Thr Pro Lys Cys Pro		
625	630	635		640
Thr Gly Arg Leu Leu Met	Asn Leu Trp Ala Ile	Phe Cys Leu Leu Val		
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Leu Ser Ser Tyr Thr Ala	Asn Leu Ala Ala Val	Met Val Gly Asp Lys		
	660	665		670
Thr Phe Glu Glu Leu Ser	Gly Ile His Asp Pro	Lys Leu His His Pro		
	675	680		685
Ala Gln Gly Phe Arg Phe	Gly Thr Val Trp Glu	Ser Ser Ala Glu Ala		
	690	695		700
Tyr Ile Lys Lys Ser Phe	Pro Asp Met His Ala	His Met Arg Arg His		
705	710	715		720
Ser Ala Pro Thr Thr Pro	Arg Gly Val Ala Met	Leu Thr Ser Asp Pro		

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Pro	Lys	Leu	Asn	Ala	Phe	Ile	Met	Asp	Lys	Ser	Leu	Leu	Asp	Tyr	Glu				
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Val	Ser	Ile	Asp	Ala	Asp	Cys	Lys	Leu	Leu	Thr	Val	Gly	Lys	Pro	Phe				
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Ala	Ile	Glu	Gly	Tyr	Gly	Ile	Gly	Leu	Pro	Gln	Asn	Ser	Pro	Leu	Thr				
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Ser	Asn	Leu	Ser	Glu	Phe	Ile	Ser	Arg	Tyr	Lys	Ser	Ser	Gly	Phe	Ile				
785					790				795						800				
Asp	Leu	Leu	His	Asp	Lys	Trp	Tyr	Lys	Met	Val	Pro	Cys	Gly	Lys	Arg				
			805					810					815						
Val	Phe	Ala	Val	Thr	Glu	Thr	Leu	Gln	Met	Ser	Ile	Tyr	His	Phe	Ala				
			820					825					830						
Gly	Leu	Phe	Val	Leu	Leu	Cys	Leu	Gly	Leu	Gly	Ser	Ala	Leu	Leu	Ser				
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Ser	Leu	Gly	Glu	His	Ala	Phe	Phe	Arg	Leu	Ala	Leu	Pro	Arg	Ile	Arg				
		850				855					860								
Lys	Gly	Ser	Arg	Leu	Gln	Tyr	Trp	Leu	His	Thr	Ser	Gln	Lys	Ile	His				
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Arg	Ala	Leu	Asn	Thr	Glu	Pro	Pro	Glu	Gly	Ser	Lys	Glu	Glu	Thr	Ala				
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<210> 4517  
 <211> 2275  
 <212> DNA  
 <213> Homo sapiens

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2275

&lt;210&gt; 4518



&lt;211&gt; 650

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4518

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Val Ser Ser Leu Leu Leu Gln Glu Glu Glu Pro Leu Ala Gly Gly Lys
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Pro Gly Ala Asp Gly Gly Ser Leu Glu Ala Val Arg Leu Gly Pro Ser
          50          55          60
Ser Gly Leu Leu Val Asp Trp Leu Glu Met Leu Asp Pro Glu Val Val
65          70          75          80
Ser Ser Cys Pro Asp Leu Gln Leu Arg Leu Leu Phe Ser Arg Arg Lys
          85          90          95
Gly Lys Gly Gln Ala Gln Val Pro Ser Phe Arg Pro Tyr Leu Leu Thr
          100          105          110
Leu Phe Thr His Gln Ser Ser Trp Pro Thr Leu His Gln Cys Ile Arg
          115          120          125
Val Leu Leu Gly Lys Ser Arg Glu Gln Arg Phe Asp Pro Ser Ala Ser
          130          135          140
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Gln Ala Arg Leu Pro Leu Leu Leu Ser Cys Cys Cys Gly Asp Asp Glu
          210          215          220
Ser Val Arg Lys Val Thr Glu His Leu Ser Gly Cys Ile Gln Gln Trp
225          230          235          240
Gly Asp Ser Val Leu Gly Arg Arg Cys Arg Asp Leu Leu Leu Gln Leu
          245          250          255
Tyr Leu Gln Arg Pro Glu Leu Arg Val Pro Val Pro Glu Val Leu Leu
          260          265          270
His Ser Glu Gly Ala Ala Ser Ser Ser Val Cys Lys Leu Asp Gly Leu
          275          280          285
Ile His Arg Phe Ile Thr Leu Leu Ala Asp Thr Ser Asp Ser Arg Ala
          290          295          300
Leu Glu Asn Arg Gly Ala Asp Ala Ser Met Ala Cys Arg Lys Leu Ala
305          310          315          320
Val Ala His Pro Leu Leu Leu Leu Arg His Leu Pro Met Ile Ala Ala
          325          330          335
Leu Leu His Gly Arg Thr His Leu Asn Phe Gln Glu Phe Arg Gln Gln
          340          345          350
Asn His Leu Ser Cys Phe Leu His Val Leu Gly Leu Leu Glu Leu Leu
          355          360          365
Gln Pro His Val Phe Arg Ser Glu His Gln Gly Ala Leu Trp Asp Cys
          370          375          380
Leu Leu Ser Phe Ile Arg Leu Leu Leu Asn Tyr Arg Lys Ser Ser Arg

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385		390		395		400									
His	Leu	Ala	Ala	Phe	Ile	Asn	Lys	Phe	Val	Gln	Phe	Ile	His	Lys	Tyr
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Ile	Thr	Tyr	Asn	Ala	Pro	Ala	Ala	Ile	Ser	Phe	Leu	Gln	Lys	His	Ala
			420					425					430		
Asp	Pro	Leu	His	Asp	Leu	Ser	Phe	Asp	Asn	Ser	Asp	Leu	Val	Met	Leu
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Lys	Ser	Leu	Leu	Ala	Gly	Leu	Ser	Leu	Pro	Ser	Arg	Asp	Asp	Arg	Thr
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Asp	Arg	Gly	Leu	Asp	Glu	Glu	Gly	Glu	Glu	Glu	Ser	Ser	Ala	Gly	Ser
465					470					475					480
Leu	Pro	Leu	Val	Ser	Val	Ser	Leu	Phe	Thr	Pro	Leu	Thr	Ala	Ala	Glu
			485					490						495	
Met	Ala	Pro	Tyr	Met	Lys	Arg	Leu	Ser	Arg	Gly	Gln	Thr	Val	Glu	Gly
		500						505					510		
Glu	Ser	Gly	Pro	Ala	Ser	Pro	Thr	Pro	Asp	Leu	Leu	Glu	Val	Leu	Ser
	515						520					525			
Asp	Ile	Asp	Glu	Met	Ser	Arg	Arg	Arg	Pro	Glu	Ile	Leu	Ser	Phe	Phe
	530					535					540				
Ser	Thr	Asn	Leu	Gln	Arg	Leu	Met	Ser	Ser	Ala	Glu	Glu	Cys	Cys	Arg
545					550					555					560
Asn	Leu	Ala	Phe	Ser	Leu	Ala	Leu	Arg	Ser	Met	Gln	Asn	Ser	Pro	Ser
			565					570						575	
Ile	Ala	Ala	Ala	Phe	Leu	Pro	Thr	Phe	Met	Tyr	Cys	Leu	Gly	Ser	Gln
		580						585					590		
Asp	Phe	Glu	Val	Val	Gln	Thr	Ala	Leu	Arg	Asn	Leu	Pro	Glu	Tyr	Ala
	595						600					605			
Leu	Leu	Cys	Gln	Glu	His	Ala	Ala	Val	Leu	Leu	His	Arg	Ala	Phe	Leu
	610					615					620				
Val	Gly	Met	Tyr	Gly	Gln	Met	Asp	Pro	Ser	Ala	Gln	Ile	Ser	Glu	Ala
625					630					635					640
Leu	Arg	Ile	Leu	His	Met	Glu	Ala	Val	Met						
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&lt;210&gt; 4519

&lt;211&gt; 2326

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4519

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120

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tatgtatctg gcggttaattg ggaaagcttc tgagaaagtc catggggccg atgtatggga  
240

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300

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420

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2040

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<210> 4520

<211> 617

<212> PRT

<213> Homo sapiens

<400> 4520

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Thr	Asn	Cys	Lys	Gln	Ala	Glu	Arg	Pro	Asn	Asn	Gln	Gln	Asn	Cys	Phe	35	40	45	
Lys	Val	Cys	Asp	Trp	His	Lys	Glu	Leu	Tyr	Asp	Trp	Arg	Leu	Gly	Pro	50	55	60	
Trp	Asn	Gln	Cys	Gln	Pro	Val	Ile	Ser	Lys	Ser	Leu	Glu	Lys	Pro	Leu	65	70	75	80
Glu	Cys	Ile	Lys	Gly	Glu	Glu	Gly	Ile	Gln	Val	Arg	Glu	Ile	Ala	Cys	85	90	95	
Ile	Gln	Lys	Asp	Lys	Asp	Ile	Pro	Ala	Glu	Asp	Ile	Ile	Cys	Glu	Tyr	100	105	110	
Phe	Glu	Pro	Lys	Pro	Leu	Leu	Glu	Gln	Ala	Cys	Leu	Ile	Pro	Cys	Gln	115	120	125	
Gln	Asp	Cys	Ile	Val	Ser	Glu	Phe	Ser	Ala	Trp	Ser	Glu	Cys	Ser	Lys	130	135	140	
Thr	Cys	Gly	Ser	Gly	Leu	Gln	His	Arg	Thr	Arg	His	Val	Val	Ala	Pro	145	150	155	160
Pro	Gln	Phe	Gly	Gly	Ser	Gly	Cys	Pro	Asn	Leu	Thr	Glu	Phe	Gln	Val	165	170	175	
Cys	Gln	Ser	Ser	Pro	Cys	Glu	Ala	Glu	Glu	Leu	Arg	Tyr	Ser	Leu	His	180	185	190	
Val	Gly	Pro	Trp	Ser	Thr	Cys	Ser	Met	Pro	His	Ser	Arg	Gln	Val	Arg	195	200	205	
Gln	Ala	Arg	Arg	Arg	Gly	Lys	Asn	Lys	Glu	Arg	Glu	Lys	Asp	Arg	Ser	210	215	220	
Lys	Gly	Val	Lys	Asp	Pro	Glu	Ala	Arg	Glu	Leu	Ile	Lys	Lys	Lys	Arg	225	230	235	240
Asn	Arg	Asn	Arg	Gln	Asn	Arg	Gln	Glu	Asn	Lys	Tyr	Trp	Asp	Ile	Gln	245	250	255	
Ile	Gly	Tyr	Gln	Thr	Arg	Glu	Val	Met	Cys	Ile	Asn	Lys	Thr	Gly	Lys	260	265	270	
Ala	Ala	Asp	Leu	Ser	Phe	Cys	Gln	Gln	Glu	Lys	Leu	Pro	Met	Thr	Phe	275	280	285	
Gln	Ser	Cys	Val	Ile	Thr	Lys	Glu	Cys	Gln	Val	Ser	Glu	Trp	Ser	Glu				

290	295	300
Trp Ser Pro Cys Ser Lys Thr Cys His Asp Met Val Ser Pro Ala Gly		
305	310	315
Thr Arg Val Arg Thr Arg Thr Ile Arg Gln Phe Pro Ile Gly Ser Glu		
	325	330
Lys Glu Cys Pro Glu Phe Glu Glu Lys Glu Pro Cys Leu Ser Gln Gly		
	340	345
Asp Gly Val Val Pro Cys Ala Thr Tyr Gly Trp Arg Thr Thr Glu Trp		
	355	360
Thr Glu Cys Arg Val Asp Pro Leu Leu Ser Gln Gln Asp Lys Arg Arg		
	370	375
Gly Asn Gln Thr Ala Leu Cys Gly Gly Gly Ile Gln Thr Arg Glu Val		
385	390	395
Tyr Cys Val Gln Ala Asn Glu Asn Leu Leu Ser Gln Leu Ser Thr His		
	405	410
Lys Asn Lys Glu Ala Ser Lys Pro Met Asp Leu Lys Leu Cys Thr Gly		
	420	425
Pro Ile Pro Asn Thr Thr Gln Leu Cys His Ile Pro Cys Pro Thr Glu		
	435	440
Cys Glu Val Ser Pro Trp Ser Ala Trp Gly Pro Cys Thr Tyr Glu Asn		
	450	455
Cys Asn Asp Pro Gln Gly Lys Lys Gly Phe Lys Leu Arg Lys Arg Arg		
465	470	475
Ile Thr Asn Glu Pro Thr Gly Gly Ser Gly Leu Thr Gly Asn Cys Pro		
	485	490
His Leu Leu Glu Ala Ile Pro Cys Glu Glu Pro Ala Cys Tyr Asp Trp		
	500	505
Lys Ala Val Arg Leu Gly Asp Cys Glu Pro Asp Asn Gly Lys Glu Cys		
	515	520
Gly Pro Gly Thr Gln Val Gln Glu Val Val Cys Ile Asn Ser Asp Gly		
	530	535
Glu Glu Val Asp Arg Gln Leu Cys Arg Asp Ala Ile Phe Pro Ile Pro		
545	550	555
Val Ala Cys Asp Ala Pro Cys Pro Lys Asp Cys Val Leu Ser Thr Trp		
	565	570
Ser Thr Trp Ser Ser Cys Ser His Thr Cys Ser Gly Lys Thr Thr Glu		
	580	585
Gly Lys Gln Ile Arg Ala Arg Ser Ile Leu Ala Tyr Ala Gly Glu Glu		
	595	600
Gly Glu Ser Pro Ala Ser Asp Ala Ile		605
610	615	

&lt;210&gt; 4521

&lt;211&gt; 1071

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4521

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120

ttataccaat ataaacaatt actcaggaaa aaaagaaaat aaaaacttgc aagggctaaa  
180

ataacttgct taccaccaaa gatgcttgct ctaagaactg tgaagggatt caagaggaaa  
 240  
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 360  
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 480  
 aacaacaaac actcatatcc cacagttaca gaggctgaga agcctggggg caaggtacca  
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&lt;210&gt; 4522

&lt;211&gt; 189

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4522

Met	Leu	Ala	Leu	Arg	Thr	Val	Lys	Gly	Phe	Lys	Arg	Lys	Ser	Thr	Pro
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Arg	Glu	Gly	Ser	Tyr	Met	Ser	Ser	Pro	Pro	Pro	Pro	Pro	Pro	Pro	Gly
			20					25					30		
His	Thr	Glu	Thr	Ala	Ser	Ser	Phe	Gln	Pro	Ser	Pro	Phe	Ser	Ala	Asp
		35					40					45			
Phe	Glu	Leu	Gln	Ile	Ser	Leu	Leu	Tyr	Leu	Glu	Ser	Pro	Ile	Ser	Leu
	50					55				60					
Gln	Glu	Phe	Ala	Leu	Ser	Phe	Ile	Ile	Ile	Leu	Val	Tyr	Val	Leu	Asp
65					70					75				80	
Trp	Ala	Ala	Ile	Thr	Arg	Cys	His	Arg	Leu	Ser	Gly	Leu	Asn	Asn	Lys
				85				90					95		
His	Ser	Tyr	Pro	Thr	Val	Thr	Glu	Ala	Glu	Lys	Pro	Gly	Val	Lys	Val
			100					105					110		
Pro	Ala	Trp	Ser	Asp	Ser	Val	Leu	Glu	Ala	Gly	Lys	Ser	Lys	Met	Glu
		115					120					125			
Ala	Leu	Val	Gly	Leu	Val	Ser	Gly	Arg	Ala	Ser	Leu	Cys	Phe	Gln	Asp

130		135		140											
Gly	Ala	Leu	Ser	Leu	His	Leu	Pro	Glu	Gly	Arg	Asn	Ala	Val	Ser	Leu
145				150					155						160
Gln	His	Arg	Arg	Asn	Thr	Ser	Glu	Lys	Lys	Ser	Ser	Arg	Lys	Val	Glu
				165					170						175
Asn	Lys	Glu	Met	Glu	Tyr	Ile	Tyr	Glu	Asn	Tyr	Tyr	Ile			
			180					185							

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 <211> 1022  
 <212> DNA  
 <213> Homo sapiens

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 300  
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 aa  
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<210> 4524  
 <211> 262  
 <212> PRT



&lt;213&gt; Homo sapiens

&lt;400&gt; 4524

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 Gly Val Ile Phe Met Asn Gly Asn Arg Ala Ser Glu Ala Val Leu Trp  
 35 40 45  
 Glu Ala Leu Arg Lys Met Gly Leu Arg Pro Gly Val Arg His Pro Phe  
 50 55 60  
 Leu Gly Asp Leu Arg Lys Leu Ile Thr Asp Asp Phe Val Lys Gln Lys  
 65 70 75 80  
 Tyr Leu Glu Tyr Lys Lys Ile Pro Asn Ser Asn Pro Pro Glu Tyr Glu  
 85 90 95  
 Phe Leu Trp Gly Leu Arg Ala Arg His Glu Thr Ser Lys Met Arg Val  
 100 105 110  
 Leu Arg Phe Ile Ala Gln Asn Gln Asn Arg Asp Pro Arg Glu Trp Lys  
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 130 135 140  
 Asp Met Ala Glu Glu His Ala Arg Ala Gln Met Arg Ala Gln Met Asn  
 145 150 155 160  
 Ile Gly Asp Glu Ala Leu Ile Gly Arg Trp Ser Trp Asp Asp Ile Gln  
 165 170 175  
 Val Glu Leu Leu Thr Trp Asp Glu Asp Gly Asp Phe Gly Asp Ala Trp  
 180 185 190  
 Ala Arg Ile Pro Phe Ala Phe Trp Ala Arg Tyr His Gln Tyr Ile Leu  
 195 200 205  
 Asn Ser Asn Arg Ala Asn Arg Arg Ala Thr Trp Arg Ala Gly Val Ser  
 210 215 220  
 Ser Gly Thr Asn Gly Gly Ala Ser Thr Ser Val Leu Asp Gly Pro Ser  
 225 230 235 240  
 Thr Ser Ser Thr Ile Arg Thr Arg Asn Ala Ala Arg Ala Gly Ala Ser  
 245 250 255  
 Phe Phe Ser Trp Ile Gln  
 260

&lt;210&gt; 4525

&lt;211&gt; 1731

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4525

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840  
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960  
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1731

&lt;210&gt; 4526

&lt;211&gt; 344

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4526

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Xaa Asn His Gly Ile Leu Gln Ala Leu Thr Thr Glu Ala Tyr Glu Trp
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Glu Pro Arg Val Val Ser Thr Glu Val Val Arg Ala Gln Glu Glu Trp
           20           25           30
Glu Ala Val Asp Thr Ile Gln Pro Glu Thr Gly Ser Gln Ala Ser Ser
           35           40           45
Glu Gln Pro Gly Gln Leu Ile Ser Phe Ser Glu Ala Leu Gln His Phe
           50           55           60
Gln Thr Val Asp Leu Ser Pro Phe Lys Lys Arg Ile Gln Pro Thr Ile
65           70           75           80
Arg Arg Thr Gly Leu Ala Ala Leu Arg His Tyr Leu Phe Gly Pro Pro
           85           90           95
Lys Leu His Gln Arg Leu Arg Glu Glu Arg Asp Leu Val Leu Thr Ile
           100          105          110
Ala Gln Cys Gly Leu Asp Ser Gln Asp Pro Val His Gly Arg Val Leu
           115          120          125
Gln Thr Ile Tyr Lys Lys Leu Thr Gly Ser Lys Phe Asp Cys Ala Leu
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His Gly Asn His Trp Glu Asp Leu Gly Phe Gln Gly Ala Asn Pro Ala
145          150          155          160
Thr Asp Leu Arg Gly Ala Gly Phe Leu Ala Leu Leu His Leu Leu Tyr
           165          170          175
Leu Val Met Asp Ser Lys Thr Leu Pro Met Ala Gln Glu Ile Phe Arg
           180          185          190
Leu Ser Arg His His Ile Gln Gln Phe Pro Phe Cys Leu Met Ser Val
           195          200          205
Asn Ile Thr His Ile Ala Ile Gln Ala Leu Arg Glu Glu Cys Leu Ser
           210          215          220
Arg Glu Cys Asn Arg Gln Gln Lys Val Ile Pro Val Val Asn Ser Phe
225          230          235          240
Tyr Ala Ala Thr Phe Leu His Leu Ala His Val Trp Arg Thr Gln Arg
           245          250          255
Lys Thr Ile Ser Asp Ser Gly Phe Val Leu Lys Gly Val Leu Phe Leu
           260          265          270
Leu Gly Arg Pro Arg Leu Asn Ala Gln Cys Pro Arg Ser Arg Glu Pro
           275          280          285
Lys Val Val Ala Arg Leu Val Leu Ala Ala Val Leu Pro His Pro His
           290          295          300
Phe Leu Lys Phe Gln Leu Thr Lys Ile Ser Ile Thr His Pro Leu Glu
305          310          315          320
Ser Ala Ser Ser Pro Phe Ser Ala Leu Thr Val Ala Leu Phe Trp Ser
           325          330          335
Tyr Thr Tyr Asp Lys His Ile Phe
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&lt;210&gt; 4527

&lt;211&gt; 885

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4527

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gctgcattta ttgttcccag cccggcgaga aggtgttccc agaaagggttc cttgggtcac  
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 885

&lt;210&gt; 4528

&lt;211&gt; 206

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4528

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Cys	Arg	Asp	Met	Ala	Ala	Phe	Ile	Val	Pro	Ser	Pro	Ala	Arg	Arg	Cys		
			20					25					30				
Ser	Gln	Lys	Gly	Ser	Leu	Gly	His	Leu	Pro	Thr	Gln	Pro	Trp	Leu	Trp		
		35					40					45					
Ala	Ala	Met	Ser	Pro	Arg	Gly	Gln	Glu	Arg	Gly	Thr	Ser	His	Ser	Gln		
	50					55					60						
Ala	Arg	Glu	Pro	Gln	Arg	Pro	Gly	Arg	Trp	Leu	Leu	Gly	Ser	Leu	Gln		
65				70				75					80				
Ser	Ser	Pro	Gly	Thr	Leu	Gly	Gln	Ala	Gly	Thr	Ala	Ser	Arg	Arg	Arg		
			85					90					95				
Gly	Cys	Met	Val	Gln	Arg	Trp	Val	Gln	Val	Ala	Thr	Gly	Arg	Arg	Ala		
		100					105						110				
Val	Gln	Val	Pro	Lys	Gly	Ala	Leu	Gly	Leu	Ala	Leu	Gly	Glu	Thr	Ser		
	115					120						125					
Pro	Gly	Ala	Ser	Arg	Gly	Met	Ser	Gly	Gly	Ala	Gly	Gly	Cys	Trp	Ala		
	130				135						140						
Leu	Gly	Trp	Ala	Pro	Ser	Pro	Val	Leu	Pro	Ser	Trp	Leu	Leu	Glu	Gly		

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Pro	Pro	Pro	Trp	Leu	Ser	Ile	Ile	Ser	Asp	Ser	Gly	Thr	Gln	Thr	Pro
		165		170		175									
Ser	Pro	Arg	Arg	Cys	Pro	Ala	Arg	Pro	Ser	Pro	Trp	Gly	Pro	Gln	Cys
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 <211> 546  
 <212> DNA  
 <213> Homo sapiens

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 aagatggagg agaaaccctc agggcccatc ccggacatgc tggccactgc agagcccagc  
 180  
 tccagtgaga ccgacaagga ggtgttgtcc ccggctgtgc cagctgcagc cccctcctcc  
 240  
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 360  
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 420  
 gacgacgccc acctccaggg aagcaaatac cttgctccag ccctggctgc tgcctcagtt  
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 546

<210> 4530  
 <211> 84  
 <212> PRT  
 <213> Homo sapiens

<400> 4530  
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 20 25 30  
 Pro Ala Ala Ala Pro Ser Ser Ser Met Ser Glu Glu Pro Gly Pro Glu  
 35 40 45  
 Gln Ala Ala Thr Pro Pro Val Gly Asn Val Glu Gly Leu Glu Gly Cys  
 50 55 60  
 Ser Arg Ala Pro Pro Gln Pro Gln Thr Ala Ala Ser Leu Ala Pro Asp  
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 Pro Ala Leu Ala

<210> 4531  
<211> 1414  
<212> DNA  
<213> Homo sapiens

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120  
gtgagcctgg ccaacttaaa gccgaatccc ggctccaaga aaccggagag aagaccaaga  
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240  
cggccccgct tgggctttga gggaggccag actccatttt acatccgaat cccaaaatac  
300  
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480  
gaggagggtg ctgacacctt tacggcaaaa gttaatattg aagtacagtt ggcttcagaa  
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agaagtctgg acattgtatg caaacctggt ccattctttc ttcgtggaca acccattcca  
660  
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720  
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<212> PRT  
<213> Homo sapiens

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Ser Lys Lys Pro Glu Arg Arg Pro Arg Gly Arg Arg Gly Arg Lys  
35 40 45  
Cys Gly Arg Gly His Lys Gly Glu Arg Gln Arg Gly Thr Arg Pro Arg  
50 55 60  
Leu Gly Phe Glu Gly Gly Gln Thr Pro Phe Tyr Ile Arg Ile Pro Lys  
65 70 75 80  
Tyr Gly Phe Asn Glu Gly His Ser Phe Arg Arg Gln Tyr Lys Pro Leu  
85 90 95  
Ser Leu Asn Arg Leu Gln Tyr Leu Ile Asp Leu Gly Arg Val Asp Pro  
100 105 110  
Ser Gln Pro Ile Asp Leu Thr Gln Leu Val Asn Gly Arg Gly Val Thr  
115 120 125  
Ile Gln Pro Leu Lys Arg Asp Tyr Gly Val Gln Leu Val Glu Glu Gly  
130 135 140  
Ala Asp Thr Phe Thr Ala Lys Val Asn Ile Glu Val Gln Leu Ala Ser  
145 150 155 160  
Glu Leu Ala Ile Ala Ala Ile Glu Lys Asn Gly Gly Val Val Thr Thr  
165 170 175  
Ala Phe Tyr Asp Pro Arg Ser Leu Asp Ile Val Cys Lys Pro Val Pro  
180 185 190  
Phe Phe Leu Arg Gly Gln Pro Ile Pro Lys Arg Met Leu Pro Pro Glu  
195 200 205  
Glu Leu Val Pro Tyr Tyr Thr Asp Ala Lys Asn Arg Gly Tyr Leu Ala  
210 215 220  
Asp Pro Ala Lys Phe Pro Glu Ala Arg Leu Glu Leu Ala Arg Lys Tyr  
225 230 235 240  
Gly Tyr Ile Leu Pro Asp Ile Thr Lys Asp Glu Leu Phe Lys Met Leu  
245 250 255  
Cys Thr Arg Lys Asp Pro Arg Gln Ile Phe Phe Gly Leu Ala Pro Gly  
260 265 270  
Trp Val Val Asn Met Ala Asp Lys Lys Ile Leu Lys Pro Thr Asp Glu  
275 280 285  
Asn Leu Leu Lys Tyr Tyr Thr Ser  
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<210> 4533  
<211> 968  
<212> DNA  
<213> Homo sapiens

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 360  
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 420  
 tactggatat acgagcgggg gaagaaggtc aagtgcacgg cccacagta cgttgacttc  
 480  
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 968

&lt;210&gt; 4534

&lt;211&gt; 284

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4534

Thr	Arg	Ala	Gln	His	Met	Cys	Ala	His	Ala	Asp	Ala	Gly	Glu	Asn	Thr
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His	His	Arg	Leu	Phe	Ala	His	Val	Cys	Pro	Cys	Pro	Asp	Ala	Gly	Ala
			20					25					30		
Glu	Ala	Asp	Arg	Val	Gly	Gln	Arg	Ala	Arg	Arg	Pro	Arg	Ala	Ala	Met
		35					40					45			
Asp	Trp	Leu	Met	Gly	Lys	Ser	Lys	Ala	Lys	Pro	Asn	Gly	Lys	Lys	Pro
	50					55					60				
Ala	Ala	Glu	Glu	Arg	Lys	Ala	Tyr	Leu	Glu	Pro	Glu	His	Thr	Lys	Ala
65					70					75				80	
Arg	Ile	Thr	Asp	Phe	Gln	Phe	Lys	Glu	Leu	Val	Val	Leu	Pro	Arg	Glu
			85					90					95		
Ile	Asp	Leu	Asn	Glu	Trp	Leu	Ala	Ser	Asn	Thr	Thr	Thr	Phe	Phe	His
		100						105					110		
His	Ile	Asn	Leu	Gln	Tyr	Ser	Thr	Ile	Ser	Glu	Phe	Cys	Thr	Gly	Glu

115	120	125
Thr Cys Gln Thr Met Ala Val Cys Asn Thr Gln Tyr Tyr Trp Tyr Asp		
130	135	140
Glu Arg Gly Lys Lys Val Lys Cys Thr Ala Pro Gln Tyr Val Asp Phe		
145	150	155
Val Met Ser Ser Val Gln Lys Leu Val Thr Asp Glu Asp Val Phe Pro		
165	170	175
Thr Lys Tyr Gly Arg Glu Phe Pro Ser Ser Phe Glu Ser Leu Val Arg		
180	185	190
Lys Ile Cys Arg His Leu Phe His Val Leu Ala His Ile Tyr Trp Ala		
195	200	205
His Phe Lys Glu Thr Leu Ala Leu Glu Leu His Gly His Leu Asn Thr		
210	215	220
Leu Tyr Val His Phe Ile Leu Phe Ala Arg Glu Phe Asn Leu Leu Asp		
225	230	235
Pro Lys Glu Thr Ala Ile Met Asp Asp Leu Thr Glu Val Leu Cys Ser		
245	250	255
Gly Ala Gly Gly Val His Ser Gly Gly Ser Gly Asp Gly Ala Gly Ser		
260	265	270
Gly Gly Pro Gly Ala Gln Asn His Val Lys Glu Arg		
275	280	

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 <211> 473  
 <212> DNA  
 <213> Homo sapiens

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 473

<210> 4536  
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 <212> PRT  
 <213> Homo sapiens

<400> 4536  
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Pro	Arg	Phe	Lys	Gln	Phe	Ser	Xaa	Leu	Ser	Leu	Pro	Ser	Ser	Trp	Asp		
		35					40					45					
Tyr	Arg	Arg	Pro	Pro	Pro	Arg	Pro	Ala	Asn	Phe	Cys	Ile	Phe	Ser	Arg		
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Asn	Gly	Val	Ser	Pro	Ser	Arg	Pro	Gly	Trp	Ser							
65					70					75							

&lt;210&gt; 4537

&lt;211&gt; 2811

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4537

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1200

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2811

<210> 4538  
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 <212> PRT  
 <213> Homo sapiens

<400> 4538  
 Xaa Ala Trp His Glu Gly Asn Glu Ala Cys Asp Leu Asp Ser Thr Val  
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 Ser Ala Leu Ala Leu Ala Phe Tyr Leu Ala Lys Thr Thr Glu Ala Glu  
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 Glu Val Phe Val Pro Val Leu Asn Ile Lys Arg Ser Glu Leu Pro Leu  
 35 40 45  
 Arg Gly Asp Ile Val Phe Phe Leu Gln Lys Val His Ile Pro Glu Ser  
 50 55 60  
 Ile Leu Ile Phe Arg Asp Glu Ile Asp Leu His Ala Leu Tyr Gln Ala  
 65 70 75 80  
 Gly Gln Leu Thr Leu Ile Leu Val Asp His His Ile Leu Ser Lys Ser  
 85 90 95  
 Asp Thr Ala Leu Glu Glu Xaa Ser Ser Arg Gly Ala Arg Pro Ser Thr  
 100 105 110  
 His Arg Ala Glu Thr Leu Pro Ser Leu Xaa His Val Ser Val Glu Leu  
 115 120 125  
 Val Gly Ser Cys Ala Thr Leu Val Thr Glu Arg Ile Leu Gln Gly Ala  
 130 135 140  
 Pro Glu Ile Leu Asp Arg Gln Thr Ala Ala Leu Leu His Gly Thr Ile  
 145 150 155 160  
 Ile Leu Asp Cys Val Asn Met Asp Leu Lys Ile Gly Lys Ala Thr Pro  
 165 170 175  
 Lys Asp Ser Lys Tyr Val Glu Lys Leu Glu Ala Leu Phe Pro Asp Leu  
 180 185 190  
 Pro Lys Arg Asn Asp Ile Phe Asp Ser Leu Gln Lys Ala Lys Phe Asp  
 195 200 205  
 Val Ser Gly Leu Thr Thr Glu Gln Met Leu Arg Lys Asp Gln Lys Thr  
 210 215 220  
 Ile Tyr Arg Gln Gly Val Lys Val Ala Ile Ser Ala Ile Tyr Met Asp  
 225 230 235 240  
 Leu Glu Ala Phe Leu Gln Arg Ser Asn Leu Leu Ala Asp Leu His Ala  
 245 250 255  
 Phe Cys Gln Ala His Ser Tyr Asp Val Leu Val Ala Met Thr Ile Phe  
 260 265 270  
 Phe Asn Thr His Asn Glu Pro Val Arg Gln Leu Ala Ile Phe Cys Pro  
 275 280 285  
 His Val Ala Leu Gln Thr Thr Ile Cys Glu Val Leu Glu Arg Ser His  
 290 295 300  
 Ser Pro Pro Leu Lys Leu Thr Pro Ala Ser Ser Thr His Pro Asn Leu  
 305 310 315 320  
 His Ala Tyr Leu Gln Gly Asn Thr Gln Val Ser Arg Lys Lys Leu Leu  
 325 330 335  
 Pro Leu Leu Gln Glu Ala Leu Ser Ala Tyr Phe Asp Ser Met Lys Ile  
 340 345 350  
 Pro Ser Gly Gln Pro Glu Thr Ala Asp Val Ser Arg Glu Gln Val Asp  
 355 360 365  
 Lys Glu Leu Asp Arg Ala Ser Asn Ser Leu Ile Ser Gly Leu Ser Gln

```

      370      375      380
Asp Glu Glu Asp Pro Pro Leu Pro Pro Thr Pro Met Asn Ser Leu Val
385      390      395      400
Asp Glu Cys Pro Leu Asp Gln Gly Leu Pro Lys Leu Ser Ala Glu Ala
      405      410      415
Val Phe Glu Lys Cys Ser Gln Ile Ser Leu Ser Gln Ser Thr Thr Ala
      420      425      430
Ser Leu Ser Lys Lys
      435

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<210> 4539  
 <211> 331  
 <212> DNA  
 <213> Homo sapiens

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<400> 4539
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120
tcacctggaa actccagcaa gagcagaggc aggtggagga gctgaggatg cagcttcaga
180
agcagaaaag gaataactgt tcagagaaga agccgctgcc tttcctggct gcctccatca
240
agcaagaaga ggctgtctcc agctgtcctt ttgcatccca agtacctgtg aaaagacaaa
300
gcagcagctc aaagtgtcac ccaccggctt g
331

```

<210> 4540  
 <211> 99  
 <212> PRT  
 <213> Homo sapiens

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<400> 4540
Met Gly Ala Leu Phe Leu Leu Ser Trp Met Gly Trp Thr Pro Arg Lys
1      5      10      15
Thr Arg Ser Leu Gly Glu Asn Gln Arg Val Ile Asn Glu Leu Thr Trp
      20      25      30
Lys Leu Gln Gln Glu Gln Arg Gln Val Glu Glu Leu Arg Met Gln Leu
      35      40      45
Gln Lys Gln Lys Arg Asn Asn Cys Ser Glu Lys Lys Pro Leu Pro Phe
      50      55      60
Leu Ala Ala Ser Ile Lys Gln Glu Glu Ala Val Ser Ser Cys Pro Phe
65      70      75      80
Ala Ser Gln Val Pro Val Lys Arg Gln Ser Ser Ser Ser Lys Cys His
      85      90      95
Pro Pro Ala

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<210> 4541  
 <211> 452  
 <212> DNA  
 <213> Homo sapiens

&lt;400&gt; 4541

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 60  
 cacaggcaga tccaggggatg taactgcttc agcaagaact gttgcgaatc ccttcgctgt  
 120  
 tccagtctga gaaccataaa aaatcttcac tccagacaca aagatgtctt tctcttgaag  
 180  
 ggagacataa ccatttgtca tcaaactctg agctgctttt ggaacagatt tttcctgtaa  
 240  
 gttcttgccc tgcgtcttga tgacaatctg gacacaaatc caaaggctaa tgctaacagc  
 300  
 aaagcccaaa taaatgtaaa acctgtttat ccacaatgat attaaagggtg agaagaggtc  
 360  
 ccatgtatcc gcagagggat ccatectcct cagagccgac aggagactag gatctcggac  
 420  
 ctggagagcc cgatgattcg cactgggtact gc  
 452

&lt;210&gt; 4542

&lt;211&gt; 128

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4542

Met	Asp	Pro	Ser	Ala	Asp	Thr	Trp	Asp	Leu	Phe	Ser	Pro	Leu	Ile	Ser
1				5				10						15	
Leu	Trp	Ile	Asn	Arg	Phe	Tyr	Ile	Tyr	Leu	Gly	Phe	Ala	Val	Ser	Ile
		20						25					30		
Ser	Leu	Trp	Ile	Cys	Val	Gln	Ile	Val	Ile	Lys	Thr	Gln	Gly	Lys	Asn
		35					40					45			
Leu	Gln	Glu	Lys	Ser	Val	Pro	Lys	Ala	Ala	Gln	Asp	Leu	Met	Thr	Asn
	50					55				60					
Gly	Tyr	Val	Ser	Leu	Gln	Glu	Lys	Asp	Ile	Phe	Val	Ser	Gly	Val	Lys
65				70				75					80		
Ile	Phe	Tyr	Gly	Ser	Gln	Thr	Gly	Thr	Ala	Lys	Gly	Phe	Ala	Thr	Val
			85					90					95		
Leu	Ala	Glu	Ala	Val	Thr	Ser	Leu	Asp	Leu	Pro	Val	Ala	Ile	Ile	Asn
			100					105					110		
Leu	Lys	Glu	Tyr	Asp	Pro	Asp	Asp	His	Leu	Ile	Glu	Glu	Val	Thr	Ser
			115				120						125		

&lt;210&gt; 4543

&lt;211&gt; 815

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4543

cggccgccga ggactggcct gactcggaca tttcatcctg tggacactaa ggccaaacac  
 60  
 agggaggagg gagagcgagt cactgcaggt ccctggcctg cggctccgcc gtggctgcct  
 120  
 gaggccccgc gcaccaatgc tttgcacttt gcctcgcccg acaccctgcg ggccagagct  
 180

cctctgccgc ccaccgggct aacccttccg ggcctcacca ctcccagagt gctctgctta  
 240  
 tccggccact gactccggct cctcggaagc agggccaccc tcctgaaatg gcttggaacg  
 300  
 gggctttcca ctggtgccct ccccagacga ttgcttgtaa tgggccagtg cctcgccagg  
 360  
 gacacagcgg cagccccctg tagcttggtg ctgttcagaa acaagtccag cccaggtagg  
 420  
 gcagagggct ctgactgggg acccaagaag ggctggctgt gccgccaccg ctgccccgtc  
 480  
 accatcactg tgctgaagag ctcgaggctg ggcccaccg cggcggcccc acgttcctcc  
 540  
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 600  
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 660  
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 720  
 cagccgtcta cctcaggaag ctcgctaggg aggagcgcac tctatgtgac taatgcggac  
 780  
 tggcctgcac cgcctacgga gagaagacaa cgcgt  
 815

<210> 4544  
 <211> 150  
 <212> PRT  
 <213> Homo sapiens

<400> 4544  
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 Gln Ser Glu Pro Ser Ala Leu Pro Gly Leu Asp Leu Phe Leu Asn Ser  
 20 25 30  
 His Lys Leu Gln Gly Ala Ala Val Ser Leu Ala Arg His Trp Pro  
 35 40 45  
 Ile Thr Ser Asn Arg Leu Gly Arg Ala Pro Val Glu Ser Pro Val Pro  
 50 55 60  
 Ser His Phe Arg Arg Val Ala Leu Leu Pro Arg Ser Arg Ser Gln Trp  
 65 70 75 80  
 Pro Asp Lys Gln Ser His Ser Gly Val Val Arg Pro Gly Arg Val Ser  
 85 90 95  
 Pro Val Gly Gly Arg Gly Ala Leu Ala Arg Arg Val Ser Gly Glu Ala  
 100 105 110  
 Lys Cys Lys Ala Leu Val Arg Gly Ala Ser Gly Ser His Gly Gly Ala  
 115 120 125  
 Ala Gly Gln Gly Pro Ala Val Thr Arg Ser Pro Ser Ser Leu Cys Leu  
 130 135 140  
 Ala Leu Val Ser Thr Gly  
 145 150

<210> 4545  
 <211> 3568  
 <212> DNA  
 <213> Homo sapiens



<400> 4545  
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120  
gacagaaatg cagaggagaa aaagcgttta tctcttcagc gagaaaagat tatcgcaagg  
180  
gtgagtattg ataacaggac ccgggcatta gttcaggcat taagaagaac aactgaccca  
240  
aagctctgca ttactagggg tgaagaactg acttttcatc ttctagaatt tcctgaagga  
300  
aaaggagtgg ctgtcaagga aagaattatt ccatatttat tacgactgag acaaattaag  
360  
gatgaaactc ttcaggctgc agttagagaa attttggccc taattggcta tgtggatcca  
420  
gtgaaaggga gaggaatccg aattctctca attgatgggtg gaggaacaag gggcgtgggt  
480  
gctctccaga ccctacgaaa attagttgaa cttactcaga agccagttca tcagctcttt  
540  
gattacattt gtggtgtaag cacagggtgcc atattagctt tcatgttggg gttgtttcat  
600  
atgcccttgg atgaatgtga ggaactttat cgaaaattag gatcagatgt attttcacaa  
660  
aatgtcattg ttggaacagt aaaaatgagt tggagccatg cattttatga cagtcaaaca  
720  
tgggaaaaca ttcttaagga taggatggga tctgcactga tgattgaaac agcaagaaac  
780  
cccacatgtc ctaaggtagc tgctgtaagt accatagtaa atagagggat aacacccaaa  
840  
gcttttgtgt tcagaaacta tgggtcatttt cctggaatca actctcatta tttgggaggc  
900  
tgtcagtata aaatgtggca ggccattaga gcctcatctg ctgctccagg ctactttgca  
960  
gaatatgcat tgggaaatga tcttcatcaa gatggagggt tgcttctgaa taacccttcg  
1020  
gcattagcta tgcattgagtg taaatgtctt tggccagatg tgccggttaga gtgcatagta  
1080  
tccctgggca ctggacgtta tgagagtgat gtgagaaaca cggtaacata cacaagcttg  
1140  
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1200  
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1260  
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1320  
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1380  
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1440  
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1500  
agaagatcaa ccacattcaa taaggaattg tgggggtcga catgagttaa ctttgaaata  
1560

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1620  
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1680  
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1860  
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1920  
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1980  
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2160  
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2460  
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2640  
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2700  
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 3540  
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 3568

&lt;210&gt; 4546

&lt;211&gt; 380

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4546

Glu	Arg	Ile	Ile	Pro	Tyr	Leu	Leu	Arg	Leu	Arg	Gln	Ile	Lys	Asp	Glu
1				5					10					15	
Thr	Leu	Gln	Ala	Ala	Val	Arg	Glu	Ile	Leu	Ala	Leu	Ile	Gly	Tyr	Val
		20						25					30		
Asp	Pro	Val	Lys	Gly	Arg	Gly	Ile	Arg	Ile	Leu	Ser	Ile	Asp	Gly	Gly
		35					40					45			
Gly	Thr	Arg	Gly	Val	Val	Ala	Leu	Gln	Thr	Leu	Arg	Lys	Leu	Val	Glu
	50					55				60					
Leu	Thr	Gln	Lys	Pro	Val	His	Gln	Leu	Phe	Asp	Tyr	Ile	Cys	Gly	Val
65					70				75				80		
Ser	Thr	Gly	Ala	Ile	Leu	Ala	Phe	Met	Leu	Gly	Leu	Phe	His	Met	Pro
			85					90					95		
Leu	Asp	Glu	Cys	Glu	Glu	Leu	Tyr	Arg	Lys	Leu	Gly	Ser	Asp	Val	Phe
		100						105					110		
Ser	Gln	Asn	Val	Ile	Val	Gly	Thr	Val	Lys	Met	Ser	Trp	Ser	His	Ala
		115					120						125		
Phe	Tyr	Asp	Ser	Gln	Thr	Trp	Glu	Asn	Ile	Leu	Lys	Asp	Arg	Met	Gly
	130					135				140					
Ser	Ala	Leu	Met	Ile	Glu	Thr	Ala	Arg	Asn	Pro	Thr	Cys	Pro	Lys	Val
145					150					155				160	
Ala	Ala	Val	Ser	Thr	Ile	Val	Asn	Arg	Gly	Ile	Thr	Pro	Lys	Ala	Phe
			165					170					175		
Val	Phe	Arg	Asn	Tyr	Gly	His	Phe	Pro	Gly	Ile	Asn	Ser	His	Tyr	Leu
		180					185						190		
Gly	Gly	Cys	Gln	Tyr	Lys	Met	Trp	Gln	Ala	Ile	Arg	Ala	Ser	Ser	Ala
		195				200						205			
Ala	Pro	Gly	Tyr	Phe	Ala	Glu	Tyr	Ala	Leu	Gly	Asn	Asp	Leu	His	Gln
	210					215					220				
Asp	Gly	Gly	Leu	Leu	Leu	Asn	Asn	Pro	Ser	Ala	Leu	Ala	Met	His	Glu
225					230					235				240	
Cys	Lys	Cys	Leu	Trp	Pro	Asp	Val	Pro	Leu	Glu	Cys	Ile	Val	Ser	Leu
			245					250					255		
Gly	Thr	Gly	Arg	Tyr	Glu	Ser	Asp	Val	Arg	Asn	Thr	Val	Thr	Tyr	Thr

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<210> 4547
<211> 2211
<212> DNA
<213> Homo sapiens
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120					
cacagttcga	cgaatcggca	tggtgctatc	ttctaccttc	tctgagctcg	gcggctggga
180					
ctggaggaca	gcggtggcgg	aggcgactag	cggcggcggg	agcggcgccg	agaggccgtg
240					
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300					
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360					
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420					
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480					
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540					
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720					
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900					
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 1080  
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 2211

&lt;210&gt; 4548

&lt;211&gt; 515

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4548

Arg	Thr	Val	Asn	Ser	Thr	Arg	Glu	Thr	Pro	Pro	Lys	Ser	Lys	Leu	Ala
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Glu	Gly	Glu	Glu	Glu	Lys	Pro	Glu	Pro	Asp	Ile	Ser	Ser	Glu	Glu	Ser
			20					25					30		
Val	Ser	Thr	Val	Glu	Glu	Gln	Glu	Asn	Glu	Thr	Pro	Pro	Ala	Thr	Ser

3742

465		470		475		480									
Pro	Ser	Gly	Gly	Ser	Ser	Lys	Lys	Pro	Ala	Thr	Ser	Ala	Arg	Lys	Glu
				485					490					495	
Val	Lys	Leu	Pro	Gly	Lys	Gly	Lys	Ser	Thr	Met	Lys	Lys	Ser	Phe	Arg
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 <213> Homo sapiens

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 <213> Homo sapiens

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 Val Tyr Gly Glu Pro Leu Pro Leu Glu Gln Val Arg Arg Arg Glu Ala  
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3746

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<211> 705

<212> PRT

<213> Homo sapiens

<400> 4554

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&lt;210&gt; 4556

&lt;211&gt; 67

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4556

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			20					25					30		
Gly	Leu	Lys	Leu	Ala	Leu	Cys	Gly	Thr	Val	Leu	Asp	His	Leu	Val	Gly
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Glu	Glu	Thr	Met	Ala	Asp	Tyr	Leu	Leu	Tyr	Thr	Leu	Asn	Lys	His	Gln
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Arg	Phe	Gly													



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 Glu Thr Ser Arg Ala Phe Leu Pro Pro Pro Ser Asp Val Arg Val Arg  
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 Ser Cys Leu Tyr His Trp Ser Ala Thr Ala His Leu Pro Pro Leu Ser  
 65 70 75 80  
 Lys Lys Pro Pro Cys Thr Ile Ser His Leu Arg Pro Leu Leu Gly Leu  
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 Pro Pro Pro Ser Asp Leu His Ile Pro Ser Ala Ala Thr Leu Gly Pro  
 100 105 110  
 Cys Met His Trp Pro Pro Pro Ser Asp Ala Pro Cys Thr Ile Ser Leu  
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<210> 4559  
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&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4559

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&lt;210&gt; 4560

&lt;211&gt; 126

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4560

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Pro	Cys	Asp	Pro	Asp	Arg	Asp	Gln	Arg	Tyr	Leu	Thr	Thr	Tyr	Asn	Gln
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His	Leu	His	Pro	His	Val	Gly	Arg	Thr	Leu	Thr	Ser	Ala	Asp	Pro	Phe				
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&lt;210&gt; 4561

&lt;211&gt; 4172

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4561

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4172

&lt;210&gt; 4562

&lt;211&gt; 1182

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4562

Met	Lys	Leu	Lys	Glu	Val	Asp	Arg	Thr	Ala	Met	Gln	Ala	Trp	Ser	Pro
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3758

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Lys Glu Asp Leu Glu Lys Xaa Gln Asp Ile Lys Glu Glu Lys Glu Glu  
500 505 510  
Ser Glu Phe Leu Pro Ser Ser Gly Gly Thr Phe Asn Ile Ser Val Ser  
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Gly Asp Ile Asp Gly Leu Ile Thr Gln Ala Leu Leu Thr Gly Asn Phe  
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Glu Ser Ala Val Asp Leu Cys Leu His Asp Asn Arg Met Ala Asp Ala  
545 550 555 560  
Ile Ile Leu Ala Ile Ala Gly Gly Gln Glu Leu Leu Ala Arg Thr Gln  
565 570 575  
Lys Lys Tyr Phe Ala Lys Ser Gln Ser Lys Ile Thr Arg Leu Ile Thr  
580 585 590  
Ala Val Val Met Lys Asn Trp Lys Glu Ile Val Glu Ser Cys Asp Leu  
595 600 605  
Lys Asn Trp Arg Glu Ala Leu Ala Ala Val Leu Thr Tyr Ala Lys Pro  
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Asp Glu Phe Ser Ala Leu Cys Asp Leu Leu Gly Thr Arg Leu Glu Asn  
625 630 635 640  
Glu Gly Asp Ser Leu Leu Gln Thr Gln Ala Cys Leu Cys Tyr Ile Cys  
645 650 655  
Ala Gly Asn Val Glu Lys Leu Val Ala Cys Trp Thr Lys Ala Gln Asp  
660 665 670  
Gly Ser His Pro Leu Ser Leu Gln Asp Leu Ile Glu Lys Val Val Ile  
675 680 685  
Leu Arg Lys Ala Val Gln Leu Thr Gln Ala Met Asp Thr Ser Thr Val  
690 695 700  
Gly Val Leu Leu Ala Ala Lys Met Ser Gln Tyr Ala Asn Leu Leu Ala  
705 710 715 720  
Ala Gln Gly Ser Ile Ala Ala Ala Leu Ala Phe Leu Pro Asp Asn Thr  
725 730 735  
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740 745 750  
Gly Glu Pro Val Ala Gly His Glu Ser Pro Lys Ile Pro Tyr Glu Lys  
755 760 765  
Gln Gln Leu Pro Lys Gly Arg Pro Gly Pro Val Ala Gly His His Gln  
770 775 780  
Met Pro Arg Val Gln Thr Gln Gln Tyr Tyr Pro His Gly Glu Asn Pro  
785 790 795 800  
Pro Pro Pro Gly Phe Ile Met His Gly Asn Val Asn Pro Asn Ala Ala  
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Gly Gln Leu Pro Thr Ser Pro Gly His Met His Thr Gln Val Pro Pro  
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Tyr Pro Gln Pro Gln Pro Tyr Gln Pro Ala Gln Pro Tyr Pro Phe Gly  
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Thr Ser Asn Ala Tyr Pro Asn Thr Pro Tyr Ile Ser Ser Ala Ser Ser  
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Tyr Thr Gly Gln Ser Gln Leu Tyr Ala Ala Gln His Gln Ala Ser Ser



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 Arg Ser Ile Glu Thr Arg Asn Tyr Ser Glu Gly Leu Thr Met His Thr  
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 <212> DNA  
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 35 40 45  
 Ile Arg Ser Gln Gln Gln Gln Leu Val Glu Ser Leu His Lys Val Leu  
 50 55 60  
 Gly Gly Asn Gln Thr Leu Thr Val Asn Val Glu Gly Thr Lys Thr Leu  
 65 70 75 80  
 Pro Asp Asp Gln Thr Glu Val Val Ile Tyr Val Val Glu Arg Ser Pro  
 85 90 95  
 Asn Gly Thr Ser Arg Arg Val Pro Ala Thr Thr Leu Tyr Ala His Phe  
 100 105 110  
 Glu Gln Ala Asn Ile Lys Thr Gln Leu Gln Gln Leu Gly Val Thr Leu  
 115 120 125  
 Ser Met Thr Arg Thr Glu Leu Ser Pro Ala Gln Ile Arg Gln Leu Leu  
 130 135 140  
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 145 150 155 160  
 Val Asp Asn Pro Asp Ser Glu Lys Leu Ile Pro Val Pro Met Val Gly  
 165 170 175  
 Phe Lys Glu Leu Leu Arg Arg Leu Lys Val Gln Asp Gln Met Thr Lys  
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<212> DNA  
<213> Homo sapiens

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&lt;210&gt; 4566

&lt;211&gt; 247

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4566

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			20					25						30	
Glu	Ile	Leu	Arg	Leu	Arg	Gln	Ser	Glu	Arg	Met	Ser	Gln	Asp	Asp	Phe
		35					40					45			
Gln	Ser	Pro	Pro	Ile	Val	Glu	Leu	Arg	Glu	Lys	Ile	Gln	Pro	Glu	Ile
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Leu	Glu	Leu	Ile	Lys	Gln	Gln	Arg	Leu	Asn	Arg	Leu	Cys	Glu	Gly	Ser
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Cys	Arg	Leu	Ala	Leu	Asn	His	Lys	Val	Leu	His	Tyr	Gly	Asp	Leu	Asp				
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			165					170				175							
Pro	Asn	Lys	Tyr	Glu	Tyr	Cys	Ile	Trp	Ile	Asp	Gly	Leu	Ser	Ala	Leu				
		180						185				190							
Leu	Gly	Lys	Asp	Met	Ser	Ser	Glu	Leu	Thr	Lys	Ser	Asp	Leu	Asp	Thr				
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Leu	Leu	Ser	Met	Glu	Met	Lys	Leu	Arg	Leu	Leu	Asp	Leu	Glu	Asn	Ile				
	210					215					220								
Gln	Ile	Pro	Glu	Ala	Pro	Pro	Pro	Ile	Pro	Lys	Glu	Pro	Ser	Ser	Tyr				
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Asp	Phe	Val	Tyr	His	Tyr	Gly													
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&lt;210&gt; 4567

&lt;211&gt; 1211

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4567

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180

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240

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<211> 120  
<212> PRT  
<213> Homo sapiens

<400> 4568  
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Leu Arg Gly Gln Ser Val Gln Gln Val Gly Pro Gln Gly Leu Leu Tyr  
35 40 45  
Val Gln Gln Arg Glu Leu Ala Val Thr Ser Pro Lys Asp Gly Ser Ile  
50 55 60  
Ser Ile Leu Gly Ser Asp Asp Ala Thr Thr Cys His Ile Val Val Leu  
65 70 75 80  
Arg His Thr Gly Asn Gly Ala Thr Cys Leu Thr His Cys Asp Gly Thr  
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Ser Asp His Ala Gln Cys Gly Arg  
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<210> 4569  
<211> 1797  
<212> DNA  
<213> Homo sapiens

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1797

&lt;210&gt; 4570



<211> 141  
 <212> PRT  
 <213> Homo sapiens

<400> 4570  
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 20 25 30  
 Gln Thr Trp His Ile Arg Phe Gly Asp Asn Gly Leu Gly Thr Leu Met  
 35 40 45  
 Leu Leu Gly Pro Gly Glu Thr Val Leu Arg Gln Lys Leu Gly Val Gln  
 50 55 60  
 Gly Gly Pro Arg Val Arg His Cys Gly Glu Gly Asn Ala Gly Glu Ser  
 65 70 75 80  
 Gly Pro Thr Leu Gln Leu Gly Thr Arg Gly Arg Lys Gln Arg Gly Gln  
 85 90 95  
 Ala Ser Val Pro Leu Pro Gln Glu Gln Thr Ser Gly Pro Gln Glu Gly  
 100 105 110  
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 115 120 125  
 Lys Gly Trp Arg Ala Ala Gly Arg Gln Pro Ser Thr Arg  
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<210> 4571  
 <211> 1084  
 <212> DNA  
 <213> Homo sapiens

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 1080  
 gacc  
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<210> 4572  
 <211> 126  
 <212> PRT  
 <213> Homo sapiens

<400> 4572  
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 Ser Ser Arg Lys Ser Lys Ala Glu Leu Gln Ser Glu Glu Arg Lys Arg  
 35 40 45  
 Ile Asp Glu Leu Ile Glu Ser Gly Lys Glu Glu Gly Met Lys Ile Asp  
 50 55 60  
 Leu Ile Asp Gly Lys Gly Arg Gly Val Ile Ala Thr Lys Gln Phe Ser  
 65 70 75 80  
 Arg Gly Asp Phe Val Val Glu Tyr His Gly Asp Leu Ile Glu Ile Thr  
 85 90 95  
 Asp Ala Lys Lys Arg Glu Ala Leu Tyr Ala Gln Asp Pro Ser Thr Gly  
 100 105 110  
 Cys Tyr Met Tyr Tyr Phe Gln Tyr Leu Ser Lys Thr Tyr Trp  
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<210> 4573  
 <211> 309  
 <212> DNA  
 <213> Homo sapiens

<400> 4573  
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309

<210> 4574  
<211> 103  
<212> PRT  
<213> Homo sapiens

<400> 4574  
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20 25 30  
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35 40 45  
Ala Gly Ala Val Gly Thr Pro Gly Lys Arg Gly Pro Ser Gly Pro Gln  
50 55 60  
Gly Leu Leu Gly Pro Pro Gly Pro Pro Ala Pro Val Gly Pro Pro His  
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Glu Thr Asn Pro Phe Thr Arg  
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<210> 4575  
<211> 1068  
<212> DNA  
<213> Homo sapiens

<400> 4575  
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<210> 4576  
 <211> 107  
 <212> PRT  
 <213> Homo sapiens

<400> 4576  
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 Pro Ala Arg His Val Ala Thr Ala Gln Gly Glu Val Leu Pro Pro Gly  
 35 40 45  
 Gly Leu Gly Gly Ala Ala Gln Arg Ala Arg Gly Gln Ser His Gly Gly  
 50 55 60  
 Thr Val Pro Gly Asn Ala Pro Ala Ala Asp Leu Leu Ala Leu Ser Pro  
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<210> 4577  
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 <212> DNA  
 <213> Homo sapiens

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&lt;210&gt; 4578

&lt;211&gt; 1007

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4578

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        50           55           60
Gly Gln Lys Pro Trp Pro Trp His Leu Leu Leu Pro Ile Gly Asn Glu
65           70           75           80
Gly Leu Ile His Glu Leu His Phe Met Asp Glu Leu Val Lys Val Glu
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Ala His Asp Ala Glu Val Leu Cys Leu Glu Tyr Ser Lys Pro Glu Thr
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Gly Leu Thr Leu Leu Ala Ser Ala Ser Arg Asp Arg Leu Ile His Val
        115          120          125
Leu Asn Val Glu Lys Asn Tyr Asn Leu Glu Gln Thr Leu Asp Asp His
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Ser Ser Ser Ile Thr Ala Ile Lys Phe Ala Gly Asn Arg Asp Ile Gln
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Met Ile Ser Cys Gly Ala Asp Lys Ser Ile Tyr Phe Arg Ser Ala Gln
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Gln Gly Ser Asp Gly Leu His Phe Val Arg Thr His His Val Ala Glu
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Lys Thr Thr Leu Tyr Asp Met Asp Ile Asp Ile Thr Gln Lys Tyr Val
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Ala Val Ala Cys Gln Asp Arg Asn Val Arg Val Tyr Asn Thr Val Asn
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Cys Ser Asp Lys Ser Ile Ser Val Ile Asp Phe Tyr Ser Gly Glu Cys
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Ile Ala Lys Met Phe Gly His Ser Gly Gly Cys Ala Ser Leu Leu Gly
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Met Pro Pro His Pro Pro Thr Pro Ser Asp Ser Glu Gly Lys Cys Ser
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Asp Cys His His Leu Ile Thr Val Ser Gly Asp Ser Cys Val Phe Ile
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Trp His Leu Gly Pro Glu Ile Thr Asn Cys Met Lys Gln His Leu Leu
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Glu Ile Asp His Arg Gln Gln Gln Gln His Thr Asn Asp Lys Lys Arg
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Ser Gly His Pro Arg Ser Trp Gln Pro Leu Pro Val His Gln Arg Asp
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Glu Ser Leu Pro Gly Pro His Gly Val Met Leu Gly Thr Gln Ser Ser
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Leu Pro Ala Asn Gln Arg Gln Ala Ala Thr Val Gly Lys Ala Ala Gly

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3775

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Ser Leu Leu Glu Pro Thr Ser Gly Trp Gly Thr Ser Cys Thr Gly Cys		
885	890	895
Arg Pro Pro Ser Lys Lys Pro Ser Thr Phe Thr Val Cys Trp Ser Pro		
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Val Ala Arg Trp Thr Pro Gly Ser Ser Arg His Gly Leu Ser Trp Ser		
915	920	925
Pro Pro Ser Cys Gly Ser Thr Ala Ser Trp Arg Leu Asn Ala Trp Trp		
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Gly Leu Val Trp Pro Gln Pro Arg Leu Cys Pro Ala Gln Asp Pro Arg		
945	950	955
Pro His Arg Arg Cys Thr Pro Trp Pro Ala Gln Thr Cys Arg Pro Cys		
965	970	975
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Gly Gly Thr Glu Gly Ala Ala Pro Pro Pro Gln Pro Cys Cys Phe		
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&lt;210&gt; 4579

&lt;211&gt; 321

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4579

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321

&lt;210&gt; 4580

&lt;211&gt; 107

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4580

Xaa Lys Met Phe Gly His Ser Glu Ile Ile Thr Ser Met Lys Phe Thr  
1 5 10 15Tyr Asp Cys His His Leu Ile Thr Val Ser Gly Asp Ser Cys Val Phe  
20 25 30Ile Trp His Leu Gly Pro Glu Ile Thr Asn Cys Met Lys Gln His Leu  
35 40 45

Leu Glu Ile Asp His Arg Gln Gln Gln Gln His Thr Asn Asp Lys Lys

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Arg	Ser	Gly	Pro	Pro	Arg	Gln	Asp	Thr	Tyr	Val	Ser	Thr	Pro	Ser
65					70					75				80
Ile	His	Ser	Leu	Ser	Pro	Gly	Glu	Gln	Thr	Glu	Asp	Asp	Leu	Glu
				85					90					95
Glu	Cys	Glu	Pro	Glu	Glu	Met	Leu	Lys	Thr	Pro				
			100					105						

&lt;210&gt; 4581

&lt;211&gt; 1396

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4581

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 <213> Homo sapiens

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 Leu Ala Lys Lys Glu Ala Lys Glu Arg Lys Lys Arg Glu Lys Met Gly  
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 65 70 75 80  
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 Lys Gly Ile Ser His Leu Glu Glu Lys Glu Leu Lys Glu Arg Asn Lys  
 100 105 110  
 Arg Ile Gln Glu Asp Asn Arg Leu Glu Leu Gln Lys Val Lys Gln Leu  
 115 120 125  
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 145 150 155 160  
 Gln Glu Asp Asn Phe His Leu Gln Gln Ala Lys Leu Arg Ser Lys Ile  
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 Arg Ile Arg Asp Gly Arg Ala Lys Pro Ile Asp Leu Leu Ala Lys Tyr  
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 Ile Ser Ala Glu Asp Asp Asp Leu Ala Gly Glu Met His Glu Pro Tyr  
 195 200 205  
 Thr Phe Leu Asn Gly Leu Thr Val Ala Asp Met Glu Asp Leu Leu Glu  
 210 215 220  
 Asp Ile Gln Val Tyr Met Glu Leu Glu Gln Gly Lys Asn Ala Asp Phe  
 225 230 235 240  
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 245 250 255  
 Lys Leu Glu Ala Ser Gly Lys Gly Pro Gly Glu Arg Arg Glu Gly Val  
 260 265 270  
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 275 280 285  
 Tyr Asn Gln Leu Gln Val Ile Phe Gln Gly Ile Glu Gly Lys Ile Arg  
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&lt;210&gt; 4584

&lt;211&gt; 923

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4584

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Trp	Leu	Gly	Glu	Leu	Gln	Arg	Ser	Val	His	Ala	Trp	Glu	Ile	Ser	Asp
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Gln	Leu	Leu	Gln	Ile	Arg	Gln	Asp	Val	Glu	Ser	Cys	Tyr	Phe	Ala	Ala
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Gln	Thr	Met	Lys	Met	Lys	Ile	Gln	Thr	Ser	Phe	Tyr	Glu	Leu	Pro	Thr
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Asp	Ser	His	Ala	Ser	Leu	Arg	Asp	Ser	Leu	Leu	Thr	His	Ile	Gln	Asn
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Ala	Asp	Leu	Ala	Leu	Gln	Met	Pro	Ser	Trp	Lys	Gly	Cys	Val	Gln	Thr
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	260		265		270	
Val Leu Thr Leu Glu Thr Ala Tyr His Met Ala Val Ala Arg Glu Asp						
	275		280		285	
Leu Asp Lys Val Leu Asn Tyr Cys Arg Ile Phe Thr Glu Leu Cys Glu						
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Thr Phe Leu Glu Lys Ile Val Cys Thr Pro Gly Gln Gly Leu Gly Asp						
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Leu Arg Thr Leu Glu Leu Leu Leu Ile Cys Ala Gly His Pro Gln Tyr						
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Glu Val Val Glu Ile Ser Phe Asn Phe Trp Tyr Arg Leu Gly Glu His						
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Leu Tyr Lys Thr Asn Asp Glu Val Ile His Gly Ile Phe Lys Ala Tyr						
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Ile Gln Arg Leu Leu His Ala Leu Ala Arg His Cys Gln Leu Glu Pro						
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Asp His Glu Gly Val Pro Glu Glu Thr Asp Asp Phe Gly Glu Phe Arg						
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Met Arg Val Ser Asp Leu Val Lys Asp Leu Ile Phe Leu Ile Gly Ser						
	405		410		415	
Met Glu Cys Phe Ala Gln Leu Tyr Ser Thr Leu Lys Glu Gly Asn Pro						
	420		425		430	
Pro Trp Glu Val Thr Glu Ala Val Leu Phe Ile Met Ala Ala Ile Ala						
	435		440		445	
Lys Ser Val Asp Pro Glu Asn Asn Pro Thr Leu Val Glu Val Leu Glu						
	450		455		460	
Gly Val Val Arg Leu Pro Glu Thr Val His Thr Ala Val Arg Tyr Thr						
	465		470		475	
Ser Ile Glu Leu Val Gly Glu Met Ser Glu Val Val Asp Arg Asn Pro						
	485		490		495	
Gln Phe Leu Asp Pro Val Leu Gly Tyr Leu Met Lys Gly Leu Cys Glu						
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Lys Pro Leu Ala Ser Ala Ala Ala Lys Ala Ile His Asn Ile Cys Ser						
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Val Cys Arg Asp His Met Ala Gln His Phe Asn Gly Leu Leu Glu Ile						
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Ala Arg Ser Leu Asp Ser Phe Leu Leu Ser Pro Glu Ala Ala Val Gly						
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Leu Leu Lys Gly Thr Ala Leu Val Leu Ala Arg Leu Pro Leu Asp Lys						
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Ile Thr Glu Cys Leu Ser Glu Leu Cys Ser Val Gln Val Met Ala Leu						
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Lys Lys Leu Leu Ser Gln Glu Pro Ser Asn Gly Ile Ser Ser Asp Pro						
	595		600		605	
Thr Val Phe Leu Asp Arg Leu Ala Val Ile Phe Arg His Thr Asn Pro						
	610		615		620	
Ile Val Glu Asn Gly Gln Thr His Pro Cys Gln Lys Val Ile Gln Glu						
	625		630		635	
Ile Trp Pro Val Leu Ser Glu Thr Leu Asn Lys His Arg Ala Asp Asn						
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Arg Ile Val Glu Arg Cys Cys Arg Cys Leu Arg Phe Ala Val Arg Cys						



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420
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&lt;210&gt; 4586

<211> 530  
 <212> PRT  
 <213> Homo sapiens

<400> 4586

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Lys Asp Val His Lys Gly Val Gly Gly Ile Ile Phe Ser Ser Ser Pro
           35           40           45
Ile Leu Asp Leu Ser Glu Ser Gly Leu Cys Arg Leu Glu Glu Val Phe
           50           55           60
Arg Ile Pro Ser Leu Gln Gln Leu His Leu Gln Arg Asn Ala Leu Cys
65           70           75           80
Val Ile Pro Gln Asp Phe Phe Gln Leu Leu Pro Asn Leu Thr Trp Leu
           85           90           95
Asp Leu Arg Tyr Asn Arg Ile Lys Ala Leu Pro Ser Gly Ile Gly Ala
           100          105          110
His Gln His Leu Lys Thr Leu Leu Leu Glu Arg Asn Pro Ile Lys Met
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Leu Pro Val Glu Leu Gly Ser Val Thr Thr Leu Lys Ala Leu Asn Leu
           130          135          140
Arg His Cys Pro Leu Glu Phe Pro Pro Gln Leu Val Val Gln Lys Gly
145          150          155          160
Leu Val Ala Ile Gln Arg Phe Leu Arg Met Trp Ala Val Glu His Ser
           165          170          175
Leu Pro Arg Asn Pro Thr Ser Gln Glu Ala Pro Pro Val Arg Glu Met
           180          185          190
Thr Leu Arg Asp Leu Pro Ser Pro Gly Leu Glu Leu Ser Gly Asp His
           195          200          205
Ala Ser Asn Gln Gly Ala Val Asn Ala Gln Asp Pro Glu Gly Ala Val
           210          215          220
Met Lys Glu Lys Ala Ser Phe Leu Pro Pro Val Glu Lys Pro Asp Leu
225          230          235          240
Ser Glu Leu Arg Lys Ser Ala Asp Ser Ser Glu Asn Trp Pro Ser Glu
           245          250          255
Glu Glu Ile Arg Arg Phe Trp Lys Leu Arg Gln Glu Ile Val Glu His
           260          265          270
Val Lys Ala Asp Val Leu Gly Asp Gln Leu Leu Thr Arg Glu Leu Pro
           275          280          285
Pro Asn Leu Lys Ala Ala Leu Asn Ile Glu Lys Glu Leu Pro Lys Pro
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Arg His Val Phe Arg Arg Lys Thr Ala Ser Ser Arg Ser Ile Leu Pro
305          310          315          320
Asp Leu Leu Ser Pro Tyr Gln Met Ala Ile Arg Ala Lys Arg Leu Glu
           325          330          335
Glu Ser Arg Ala Ala Ala Leu Arg Glu Leu Gln Glu Lys Gln Ala Leu
           340          345          350
Met Glu Gln Arg Arg Glu Lys Arg Ala Leu Gln Glu Trp Arg Glu
           355          360          365
Arg Ala Gln Arg Met Arg Lys Arg Lys Glu Glu Leu Ser Lys Leu Leu
           370          375          380
Pro Pro Arg Arg Ser Met Val Ala Ser Lys Ile Pro Ser Ala Thr Asp

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 Gln Glu Arg Asn Leu Glu Glu Lys Ile Lys Gln His Val Leu Gln Met  
    435                                      440                                      445  
 Arg Glu Gln Arg Arg Phe His Gly Gln Ala Pro Leu Glu Glu Met Arg  
    450                                      455                                      460  
 Lys Ala Ala Glu Asp Leu Glu Ile Ala Thr Glu Leu Gln Asp Glu Val  
 465                                      470                                      475                                      480  
 Leu Lys Leu Lys Leu Gly Leu Thr Leu Asn Lys Asp Arg Arg Arg Ala  
    485                                      490                                      495  
 Ala Leu Thr Gly Asn Leu Ser Leu Gly Leu Pro Ala Ala Gln Pro Gln  
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 Tyr Gln  
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<210> 4587  
 <211> 1723  
 <212> DNA  
 <213> Homo sapiens

<400> 4587  
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<210> 4588  
 <211> 328  
 <212> PRT  
 <213> Homo sapiens

<400> 4588  
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 35 40 45  
 Pro Ser Phe Pro Lys Lys Lys Thr Ala Ala Ser Ser Asn Gly Ser Gly  
 50 55 60  
 Gln Pro Leu Asp Lys Lys Ala Ala Val Ser Trp Leu Thr Pro Ala Pro  
 65 70 75 80  
 Ser Lys Lys Ala Asp Ser Val Ala Ala Lys Val Asp Leu Leu Gly Glu  
 85 90 95  
 Phe Gln Ser Ala Leu Pro Lys Ile Asn Ser His Pro Thr Arg Ser Gln  
 100 105 110  
 Lys Lys Ser Ser Gln Lys Lys Ser Ser Lys Lys Asn His Pro Gln Lys  
 115 120 125  
 Asn Ala Pro Gln Asn Ser Thr Gln Ala His Ser Glu Asn Lys Cys Ser

130	135	140
Gly Ala Ser Gln Lys Leu Pro Arg Lys Met Val Ala Ile Asp Cys Glu		
145	150	155
Met Val Gly Thr Gly Pro Lys Gly His Val Ser Ser Leu Ala Arg Cys		160
	165	170
Ser Ile Val Asn Tyr Asn Gly Asp Val Leu Tyr Asp Glu Tyr Ile Leu		175
	180	185
Pro Pro Cys His Ile Val Asp Tyr Arg Thr Arg Trp Ser Gly Ile Arg		190
	195	200
Lys Gln His Met Val Asn Ala Thr Pro Phe Lys Ile Ala Arg Gly Gln		205
	210	215
Ile Leu Lys Ile Leu Thr Gly Lys Ile Val Val Gly His Ala Ile His		220
225	230	235
Asn Asp Phe Lys Ala Leu Gln Tyr Phe His Pro Lys Ser Leu Thr Arg		240
	245	250
Asp Thr Ser His Ile Pro Pro Leu Asn Arg Lys Ala Asp Cys Pro Glu		255
	260	265
Asn Ala Thr Met Ser Leu Lys His Leu Thr Lys Lys Leu Leu Asn Arg		270
	275	280
Asp Ile Gln Val Gly Lys Ser Gly His Ser Ser Val Glu Asp Ala Gln		285
	290	295
Ala Thr Met Glu Leu Tyr Lys Leu Val Glu Val Glu Trp Glu Glu His		300
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Leu Ala Arg Asn Pro Pro Thr Asp		320
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&lt;210&gt; 4589

&lt;211&gt; 585

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4589

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&lt;210&gt; 4590

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 <212> PRT  
 <213> Homo sapiens

<400> 4590  
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 Gly Val Arg Val Ser Ala Ala Pro Leu Gly Gln Gly Gly Gly His Thr  
 35 40 45  
 His Thr Leu Ser Pro Leu Ser Phe Arg Cys Ser Gln Arg Glu Pro Gln  
 50 55 60  
 Gly Phe Arg Pro Gly Met Arg Cys Gly Gly Ser Ser Leu Gly Arg Thr  
 65 70 75 80  
 Cys Cys Ser Pro Thr Arg Arg Ala Cys Val Val Ser Arg Ala Val Thr  
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<210> 4591  
 <211> 496  
 <212> DNA  
 <213> Homo sapiens

<400> 4591  
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<210> 4592  
 <211> 152  
 <212> PRT  
 <213> Homo sapiens

<400> 4592  
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Lys Ala Ser Ser Ile Tyr Ser Thr Ala Leu Cys Phe Gly Leu Lys Arg
      35           40           45
Ala Pro Leu Trp Pro Ser Gly His Asp Arg Leu His Glu Thr Arg Lys
      50           55           60
Leu Arg Cys Leu Ala Asp Arg Leu Val Ser Pro His Pro Ala Ser Ser
65           70           75           80
Pro Gly Ser Arg Tyr Leu Pro Gln Asn Ser Leu His Lys Trp Pro Gln
      85           90           95
Ala Cys Ala Gly Leu Trp Gly Phe Leu Pro Trp Ala Val Val Leu Gly
      100          105          110
Met Cys Ser Pro Gln Ala Asp Gly Gln Leu Trp Glu Gly Trp Ser Cys
      115          120          125
Arg Leu Gly Ile His Thr Pro Ala His Val Ala Ser Pro Ser Ala Val
      130          135          140
Trp Ser Gln Gly Trp Ala Gly Lys
145           150

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&lt;210&gt; 4593

&lt;211&gt; 4783

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4593

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 <212> PRT  
 <213> Homo sapiens

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 Gly Gly Pro Ser Leu Ser Ala Met Gly Asn Gly Arg Ser Ser Ser Pro  
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Lys	Lys	Leu	Lys	Gln	Ser	Gly	Glu	Pro	Phe	Leu	Gln	Asp	Gly	Ser	Cys		
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Leu Asp Ser Phe Asn Ser Thr Ala Lys Val Ser Pro Leu Thr Pro Lys		640
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Leu Phe Asn Ser Leu Leu Leu Gly Pro Thr Ala Ser Asn Asn Lys Thr		655
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Glu Gly Ser Ser Leu Arg Asp Leu Leu His Ser Gly Pro Gly Lys Leu		670
	675	680
Pro Gln Thr Pro Leu Asp Thr Gly Ile Pro Phe Pro Pro Val Phe Ser		685
	690	695
Thr Ser Ser Ala Gly Val Lys Ser Lys Ala Ser Leu Pro Asn Phe Leu		700
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Asp His Ile Ile Ala Ser Val Val Glu Asn Lys Lys Thr Ser Asp Ala		720
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Ser Lys Arg Ala Cys Asn Leu Thr Asp Thr Gln Lys Glu Val Lys Glu		735
	740	745
Met Val Met Gly Leu Asn Val Leu Asp Pro His Thr Ser His Ser Trp		750
	755	760
Leu Cys Asp Gly Arg Leu Leu Cys Leu His Asp Pro Ser Asn Lys Asn		765
	770	775
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785	790	795
Val Ser Gly Val His Lys Lys Leu Lys Ser Glu Leu Trp Lys Pro Glu		800
	805	810
Ala Phe Ser Gln Glu Phe Gly Asp Gln Asp Val Asp Leu Val Asn Cys		815
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Arg Asn Cys Ala Ile Ile Ser Asp Val Lys Val Arg Asp Phe Trp Asp		830
	835	840
Gly Phe Glu Ile Ile Cys Lys Arg Leu Arg Ser Glu Asp Gly Gln Pro		845
	850	855
Met Val Leu Lys Leu Lys Asp Trp Pro Pro Gly Glu Asp Phe Arg Asp		860
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Met Met Pro Thr Arg Phe Glu Asp Leu Met Glu Asn Leu Pro Leu Pro		880
	885	890
Glu Tyr Thr Lys Arg Asp Gly Arg Leu Asn Leu Ala Ser Arg Leu Pro		895
	900	905
Ser Tyr Phe Val Arg Pro Asp Leu Gly Pro Lys Met Tyr Asn Ala Tyr		910
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Gly Leu Ile Thr Ala Glu Asp Arg Arg Val Gly Thr Thr Asn Leu His		925
	930	935
Leu Asp Val Ser Asp Ala Val Asn Val Met Val Tyr Val Gly Ile Pro		940
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Ile Gly Glu Gly Ala His Asp Glu Glu Val Leu Lys Thr Ile Asp Glu		960
	965	970
Gly Asp Ala Asp Glu Val Thr Lys Gln Arg Ile His Asp Gly Lys Glu		975
	980	985
Lys Pro Gly Ala Leu Trp His Ile Tyr Ala Ala Lys Asp Ala Glu Lys		990
	995	1000
Ile Arg Glu Leu Leu Arg Lys Val Gly Glu Glu Gln Gly Gln Glu Asn		1005
	1010	1015
Pro Pro Asp His Asp Pro Ile His Asp Gln Ser Trp Tyr Leu Asp Gln		1020
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Thr Leu Arg Lys Arg Leu Tyr Glu Glu Tyr Gly Val Gln Gly Trp Ala		1040

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 His Gln Val His Asn Leu Tyr Ser Cys Ile Lys Val Ala Glu Asp Phe  
 1075 1080 1085  
 Val Ser Pro Glu His Val Lys His Cys Phe Arg Leu Thr Gln Glu Phe  
 1090 1095 1100  
 Arg His Leu Ser Asn Thr His Thr Asn His Glu Asp Lys Leu Gln Val  
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 <212> DNA  
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 <212> PRT  
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 Gly Arg Glu Ala Ala Leu Pro Gly Pro Ala Gly Asp Xaa Ala Val Lys  
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 65 70 75 80  
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 Pro Gly Ala Trp Ser Val Gly Gly Ala Thr Gly Pro Arg Gly Ala Lys  
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<211> 135  
 <212> PRT  
 <213> Homo sapiens

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 Glu Pro Ser Ser Trp Glu Ser Arg Glu Arg Pro Leu Gln Ser Arg Asn  
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 Val Tyr Ser Ser Ala Ser Phe Ser Glu His Leu Asp Gly Gly Cys Ser  
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300
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<210> 4602  
 <211> 305  
 <212> PRT  
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&lt;211&gt; 666

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4604

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&lt;211&gt; 456

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4607

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&lt;211&gt; 107

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&lt;213&gt; Homo sapiens

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&lt;211&gt; 904

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&lt;213&gt; Homo sapiens

&lt;400&gt; 4609

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 115 120 125  
 Asn Ala Leu Pro Gly Phe Ala Glu Ala Leu Arg Ser Tyr Gln Glu Ala  
 130 135 140  
 Ala Ala Ala Gly Thr Phe Leu Ala Val Glu Phe Thr Thr Leu Ala Asp  
 145 150 155 160  
 Tyr Leu His Leu Leu Gln Ala Ala Ala Gln Ala Leu Asn Pro Leu Gly  
 165 170 175  
 Pro Ser Ala Met Phe Tyr Leu Ala Ala Ala Val Ser Asp Phe Tyr Val  
 180 185 190  
 Pro Val Ser Glu Met Pro Glu His Lys Ile Gln Ser Ser Gly Gly Pro



195	200	205
Leu Gln Gly Lys Val Gln	Leu Glu Asp Ile Leu	His His Leu Glu Lys
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Glu Glu Ile Asn Pro Leu	Ala Thr Thr Glu Glu	Gln Leu Cys Leu Val
225	230	235
Leu Ile Pro Ala Ser Thr	Val Lys Thr Gly	
245	250	

<210> 4611  
 <211> 1946  
 <212> DNA  
 <213> Homo sapiens

<400> 4611  
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 240  
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 300  
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 360  
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 1920  
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 1946

<210> 4612  
 <211> 532  
 <212> PRT  
 <213> Homo sapiens

<400> 4612  
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 35 40 45  
 Arg Gln Arg Asn Arg Leu Arg Leu Glu Glu Asp Lys Pro Ala Val Glu  
 50 55 60  
 Arg Cys Leu Glu Glu Leu Val Phe Gly Asp Val Glu Asn Asp Glu Asp  
 65 70 75 80  
 Ala Leu Leu Arg Arg Leu Arg Gly Pro Arg Val Gln Glu His Glu Asp  
 85 90 95  
 Ser Gly Asp Ser Glu Val Glu Asn Glu Ala Lys Gly Asn Phe Pro Pro  
 100 105 110  
 Gln Lys Lys Pro Val Trp Val Asp Glu Glu Asp Glu Asp Glu Glu Met  
 115 120 125  
 Val Asp Met Met Asn Asn Arg Phe Arg Lys Asp Met Met Lys Asn Ala  
 130 135 140  
 Ser Glu Ser Lys Leu Ser Lys Asp Asn Leu Lys Lys Arg Leu Lys Glu  
 145 150 155 160  
 Glu Phe Gln His Ala Met Gly Gly Val Pro Ala Trp Ala Glu Thr Thr

					165					170					175				
Lys	Arg	Lys	Thr	Ser	Ser	Asp	Asp	Glu	Ser	Glu	Glu	Asp	Glu	Asp	Asp				
					180					185				190					
Leu	Leu	Gln	Arg	Thr	Gly	Asn	Phe	Ile	Ser	Thr	Ser	Thr	Ser	Leu	Pro				
		195						200					205						
Arg	Gly	Ile	Leu	Lys	Met	Lys	Asn	Cys	Gln	His	Ala	Asn	Ala	Glu	Arg				
	210					215					220								
Pro	Thr	Val	Ala	Arg	Ile	Ser	Ser	Val	Gln	Phe	His	Pro	Gly	Ala	Gln				
225					230					235					240				
Ile	Val	Met	Val	Ala	Gly	Leu	Asp	Asn	Ala	Val	Ser	Leu	Phe	Gln	Val				
				245					250					255					
Asp	Gly	Lys	Thr	Asn	Pro	Lys	Ile	Gln	Ser	Ile	Tyr	Leu	Glu	Arg	Phe				
			260					265					270						
Pro	Ile	Phe	Lys	Ala	Cys	Phe	Ser	Ala	Asn	Gly	Glu	Glu	Val	Leu	Ala				
		275					280					285							
Thr	Ser	Thr	His	Ser	Lys	Val	Leu	Tyr	Val	Tyr	Asp	Met	Leu	Ala	Gly				
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Lys	Leu	Ile	Pro	Val	His	Gln	Val	Arg	Gly	Leu	Lys	Glu	Lys	Ile	Val				
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Arg	Ser	Phe	Glu	Val	Ser	Pro	Asp	Gly	Ser	Phe	Leu	Leu	Ile	Asn	Gly				
				325					330					335					
Ile	Ala	Gly	Tyr	Leu	His	Leu	Leu	Ala	Met	Lys	Thr	Lys	Glu	Leu	Ile				
			340					345					350						
Gly	Ser	Met	Lys	Ile	Asn	Gly	Arg	Val	Ala	Ala	Ser	Thr	Phe	Ser	Ser				
		355					360					365							
Asp	Ser	Lys	Lys	Val	Tyr	Ala	Ser	Ser	Gly	Asp	Gly	Glu	Val	Tyr	Val				
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Trp	Asp	Val	Asn	Ser	Arg	Lys	Cys	Leu	Asn	Arg	Phe	Val	Asp	Glu	Gly				
385					390					395					400				
Ser	Leu	Tyr	Gly	Leu	Ser	Ile	Ala	Thr	Ser	Arg	Asn	Gly	Gln	Tyr	Val				
			405						410					415					
Ala	Cys	Gly	Ser	Asn	Cys	Gly	Val	Val	Asn	Ile	Tyr	Asn	Gln	Asp	Ser				
			420					425				430							
Cys	Leu	Gln	Glu	Thr	Asn	Pro	Lys	Pro	Ile	Lys	Ala	Ile	Met	Asn	Leu				
		435					440					445							
Val	Thr	Gly	Val	Thr	Ser	Leu	Thr	Phe	Asn	Pro	Thr	Thr	Glu	Ile	Leu				
	450					455					460								
Ala	Ile	Ala	Ser	Glu	Lys	Met	Lys	Glu	Ala	Val	Arg	Leu	Val	His	Leu				
465					470					475					480				
Pro	Ser	Cys	Thr	Val	Phe	Ser	Asn	Phe	Pro	Val	Ile	Lys	Asn	Lys	Asn				
			485						490					495					
Ile	Ser	His	Val	His	Thr	Met	Asp	Phe	Ser	Pro	Arg	Ser	Gly	Tyr	Phe				
		500					505					510							
Ala	Leu	Gly	Asn	Glu	Lys	Gly	Lys	Ala	Leu	Met	Tyr	Arg	Leu	His	His				
		515					520					525							
Tyr	Ser	Asp	Phe																
		530																	

&lt;210&gt; 4613

&lt;211&gt; 454

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4613

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 420  
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 454

<210> 4614  
 <211> 117  
 <212> PRT  
 <213> Homo sapiens

<400> 4614  
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 Glu Phe Thr Asn Gly Asn Leu Thr Met Ser Asn Glu Phe His Cys Lys  
 35 40 45  
 Asp Phe Leu Ile Phe Thr Thr Gln Ile Leu Thr Ile Leu Gln Leu Arg  
 50 55 60  
 Ser Leu Asn Ile Ile Tyr Asn Lys Gln Asn Leu Val Asn Leu Gln Lys  
 65 70 75 80  
 Ser Asn Ala Leu Lys Lys His Gln Ser Leu Cys Met Cys Arg Thr Asp  
 85 90 95  
 Pro Ala Pro Gln Gly Asn Thr Ala Gly Thr Val Pro Arg Thr Leu Thr  
 100 105 110  
 Ser Val Ser Leu Leu  
 115

<210> 4615  
 <211> 1350  
 <212> DNA  
 <213> Homo sapiens

<400> 4615  
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 120  
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 180  
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 240

tcgtgcttca gcctggagac gaaattgccg ttatcccccc cattagtgga ggatagtgct  
 300  
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 360  
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 420  
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 480  
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 720  
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 1320  
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 1350

&lt;210&gt; 4616

&lt;211&gt; 188

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4616

Met	Ser	Ser	Leu	Glu	Ile	Ser	Ser	Ser	Cys	Phe	Ser	Leu	Glu	Thr	Lys
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Leu	Pro	Leu	Ser	Pro	Pro	Leu	Val	Glu	Asp	Ser	Ala	Phe	Glu	Pro	Ser
			20					25					30		
Arg	Lys	Asp	Met	Asp	Glu	Val	Glu	Glu	Lys	Ser	Lys	Asp	Val	Ile	Asn
		35					40					45			
Phe	Thr	Ala	Glu	Lys	Leu	Ser	Val	Asp	Glu	Val	Ser	Gln	Leu	Val	Ile
	50					55					60				
Ser	Pro	Leu	Cys	Gly	Ala	Ile	Ser	Leu	Phe	Val	Gly	Thr	Thr	Arg	Asn

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180  
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240  
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420  
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480  
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540  
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600  
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720  
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960

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 2266

&lt;210&gt; 4618

&lt;211&gt; 197

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4618

Met Phe Leu Asp Ser Lys Glu Glu Gly Thr Ser Gln Ala Pro Asn Lys  
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 Asp Pro Thr Ala Ala Ala Ala Leu Asn Gly Gly His Cys Leu Ala



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Gln Pro Thr Ala Glu Pro Gly Leu Gly Ala Val Val Arg Ser Ile Lys
                35                40                45
Val Ser Gly Tyr Leu Asn Leu Leu Ala Asn Thr Ile Asp Asn Phe Thr
                50                55                60
His Gly Leu Ala Val Ala Ala Ser Phe Leu Val Ser Lys Lys Ile Gly
65                70                75                80
Leu Leu Thr Thr Met Ala Ile Leu Leu His Glu Ile Pro His Glu Val
                85                90                95
Gly Asp Phe Ala Ile Leu Leu Arg Ala Gly Phe Asp Arg Trp Ser Ala
                100                105                110
Ala Lys Leu Gln Leu Ser Thr Ala Leu Gly Gly Leu Leu Gly Ala Gly
                115                120                125
Phe Ala Ile Cys Thr Gln Ser Pro Lys Gly Val Glu Glu Thr Ala Ala
                130                135                140
Trp Val Leu Pro Phe Thr Ser Gly Gly Phe Leu Tyr Ile Ala Leu Val
145                150                155                160
Asn Val Leu Pro Asp Leu Leu Glu Glu Glu Asp Pro Trp Arg Ser Leu
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Gln Gln Leu Leu Leu Cys Ala Gly Ile Val Val Met Val Leu Phe
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Ser Leu Phe Val Asp
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<210> 4619  
 <211> 539  
 <212> DNA  
 <213> Homo sapiens

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120
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420
tgtgtggcag ttgctggcgt gaggtctgta acattgatgg ctaagagctt gtagatttgc
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539

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<210> 4620  
 <211> 103  
 <212> PRT  
 <213> Homo sapiens

&lt;400&gt; 4620

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 20 25 30  
 Leu Gln Ala Arg Pro Asn Pro Arg Phe Pro Gly Arg Cys Thr Pro Gly  
 35 40 45  
 Trp Glu Lys Leu Thr Asn Glu Ser Ser Trp Gln Pro Pro Gln Ala Pro  
 50 55 60  
 Pro Asp Trp Ala Ser Trp Leu Cys Cys Gln Asp Tyr Asp Pro Leu Pro  
 65 70 75 80  
 Glu Ser Arg Arg Ser Pro Gln Ala Glu Arg Tyr Arg His Leu Cys Pro  
 85 90 95  
 Tyr Leu Asn Gln Glu Val Pro  
 100

&lt;210&gt; 4621

&lt;211&gt; 2588

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4621

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 120  
 cttccatgag gagaccact ctgctccac cctctgaaa cctaaagcac agcccaaatt  
 180  
 cccaccccc gcagcatacc tagggagctc ctagtcctgg taaaacggca ggagtagggc  
 240  
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 300  
 ggctggccct catgtctggg tcttctcact ctactctcat tactcctccg cgcctgtcaa  
 360  
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 420  
 caatgtggga ctgagcggcc cagccgccgt gccgccgccg ccgccgccgc aggacagccc  
 480  
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 540  
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 gtgtctgtag tgagcttctg ccctagtgc ttttgagccg gccagggtgc agcgcggaca  
 660  
 cactcgcagg tcgctgtggc ccagcctcg cctgacagaa tgagcggctc ggacggggga  
 720  
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 780  
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<211> 403  
<212> PRT  
<213> Homo sapiens

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35 40 45  
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Phe Lys Leu Asp Glu Asp Leu Cys Ala Ala Pro Ala Asn Gly Gly Asn  
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Val Ser Arg Pro Pro Val Thr Leu Arg Leu Val Ile Pro Ala Ser Gln  
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Cys Gly Ser Leu Ile Gly Lys Ala Gly Thr Lys Ile Lys Glu Ile Arg  
115 120 125  
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130 135 140  
Ser Thr Glu Arg Ala Val Thr Val Ser Gly Val Pro Asp Ala Ile Ile  
145 150 155 160  
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165 170 175  
Gly Ala Thr Ile Pro Tyr His Pro Ser Leu Ser Leu Gly Thr Val Leu  
180 185 190  
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210 215 220  
Pro Phe Ala Thr Pro Ser Val Val Pro Gly Leu Asp Pro Gly Thr Gln  
225 230 235 240  
Thr Ser Ser Gln Glu Phe Leu Val Pro Asn Asp Leu Ile Gly Cys Val  
245 250 255  
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260 265 270  
Ala His Ile Lys Ile Gly Asn Gln Ala Glu Gly Ala Gly Glu Arg His  
275 280 285  
Val Thr Ile Thr Gly Ser Pro Val Ser Ile Ala Leu Ala Gln Tyr Leu  
290 295 300  
Ile Thr Ala Cys Leu Glu Thr Ala Lys Ser Thr Ser Gly Gly Thr Pro  
305 310 315 320  
Gly Ser Ala Pro Ala Asp Leu Pro Thr Pro Phe Ser Pro Pro Leu Thr  
325 330 335  
Ala Leu Pro Thr Ala Pro Pro Gly Leu Leu Gly Thr Pro Tyr Ala Ile  
340 345 350  
Ser Leu Ser Asn Phe Ile Gly Leu Lys Pro Val Pro Phe Leu Ala Leu

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 <211> 2220  
 <212> DNA  
 <213> Homo sapiens

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 <211> 189  
 <212> PRT  
 <213> Homo sapiens

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 35 40 45  
 Lys Lys Gly Asn Met Asp Glu Ala His Ile Asp Gln Val Arg Arg Lys  
 50 55 60  
 Ala Leu Gln Glu Glu Ile Asp Arg Glu Ser Gly Lys Thr Glu Ala Ser  
 65 70 75 80  
 Glu Thr Arg Lys Trp Thr Gly Thr Gln Phe Gly Gln Trp Asp Thr Ala  
 85 90 95  
 Gly Phe Glu Asn Glu Asp Gln Lys Leu Lys Phe Leu Arg Leu Met Gly

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Gly	Phe	Lys	Asn	Leu	Ser	Pro	Ser	Phe	Ser	Arg	Pro	Ala	Ser	Thr	Ile		
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		130						135					140				
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 <211> 334  
 <212> DNA  
 <213> Homo sapiens

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 334

<210> 4626  
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 <212> PRT  
 <213> Homo sapiens

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			20					25					30				
Glu	Gln	Glu	Tyr	Lys	Arg	Lys	Gln	Leu	Glu	Glu	Gln	Arg	Gln	Ser	Glu		
		35					40					45					
Arg	Leu	Gln	Arg	Gln	Leu	Gln	Glu	His	Ala	Tyr	Leu	Lys	Ser	Leu			
50					55				60								
Gln	Gln	Gln	Gln	Gln	Gln	Gln	Gln	Leu	Gln	Lys	Gln	Gln	Gln	Gln	Gln		
65				70					75					80			
Leu	Leu	Pro	Gly	Asp	Arg	Lys	Pro	Leu	Tyr	His	Tyr	Gly	Arg	Gly	Met		
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Asn	Pro	Ala	Asp	Lys	Pro	Ala	Trp	Ala	Arg	Glu	Gly	Glu	Glu	Arg			
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<210> 4627  
 <211> 1736



&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4627

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180  
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240  
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360  
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<211> 469

<212> PRT

<213> Homo sapiens

<400> 4628

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			20					25					30		
Pro	Glu	Ala	Lys	Gln	Glu	Ile	Leu	Glu	Asn	Lys	Asp	Val	Val	Val	Gln
			35					40					45		
His	Val	His	Phe	Asp	Gly	Leu	Gly	Arg	Thr	Lys	Asp	Asp	Ile	Ile	Ile
			50				55				60				
Cys	Glu	Ile	Gly	Asp	Val	Phe	Lys	Ala	Lys	Asn	Leu	Ile	Glu	Val	Met
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Arg	Lys	Ser	His	Glu	Ala	Arg	Glu	Lys	Leu	Leu	Arg	Leu	Gly	Ile	Phe
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Arg	Gln	Val	Asp	Val	Leu	Ile	Asp	Thr	Cys	Gln	Gly	Asp	Gly	Ala	Leu
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				165					170					175	
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Thr	Ala	Ser	Phe	Ala	Val	Arg	Lys	Glu	Ser	Gly	His	Ser	Leu	Lys	Ser
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Ser	Leu	Ser	His	Ala	Met	Val	Ile	Asp	Ser	Arg	Asn	Ser	Ser	Ile	Leu
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Pro	Arg	Arg	Gly	Ala	Leu	Leu	Lys	Val	Asn	Gln	Glu	Leu	Ala	Gly	Tyr
			275				280						285		
Thr	Gly	Gly	Asp	Val	Ser	Phe	Ile	Lys	Glu	Asp	Phe	Glu	Leu	Gln	Leu
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<211> 706
<212> DNA
<213> Homo sapiens
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<210> 4630

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Arg Asp Gln Gly Ala Leu Ser Leu Ser Arg Met Gly Arg Asp Ala Ser
      35           40           45
Ser Trp Ala Leu Arg Val Ser Val Phe Pro Gln Ile Gly Lys Met Arg
      50           55           60
Gly Arg Gly Gly Tyr Trp Gly Gln Ala Ser Ala Gln Pro Trp Val Leu
65           70           75           80
Leu Glu Pro Gly Leu Glu Pro Glu Val Gly Arg Val Ser Lys Leu Ser
      85           90           95
Ser Trp Ile Pro Ile Cys Arg Thr Ala Pro Arg Thr Arg Ser Gly Val
      100           105           110
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Gly Gln Gly Thr Arg Asp Pro Pro Thr Gln Glu Thr
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720
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<211> 372

<212> PRT

<213> Homo sapiens

<400> 4632

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Asp	Leu	Gln	Ile	Ala	Leu	Ala	Ser	Phe	Tyr	Glu	Asp	Gly	Gly	Asp	Glu
		35					40					45			
Asp	Ile	Val	Thr	Ile	Ser	Gln	Ala	Thr	Pro	Ser	Ser	Val	Ser	Arg	Gly
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Thr	Ala	Pro	Ser	Asp	Asn	Arg	Val	Thr	Ser	Phe	Arg	Asp	Leu	Ile	His
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Tyr	Ala	Gly	Gly	Ser	Glu	Arg	Ser	Gly	Gln	Gln	Ile	Val	Gly	Pro	Pro
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Arg	Lys	Lys	Ser	Pro	Asn	Glu	Leu	Val	Asp	Asp	Leu	Phe	Lys	Gly	Ala
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Lys	Glu	His	Gly	Ala	Val	Ala	Val	Glu	Arg	Val	Thr	Lys	Ser	Pro	Gly
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His	Ser	Ser	Gln	Asp	Val	His	Val	Val	Leu	Lys	Leu	Trp	Lys	Ser	Gly
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Phe	Ser	Leu	Asp	Asn	Gly	Glu	Leu	Arg	Ser	Tyr	Gln	Asp	Pro	Ser	Asn
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305                310                315                320
Ser Asp Ile Arg Leu Phe Ile Val Asp Ala Arg Pro Ala Met Ala Ala
                325                330                335
Thr Ser Phe Ile Leu Met Thr Thr Phe Pro Asn Lys Glu Leu Ala Asp
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Glu Ser Gln Thr Leu Lys Glu Ala Asn Leu Leu Asn Ala Val Ile Val
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Gln Arg Leu Thr
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 <213> Homo sapiens

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<210> 4634



<211> 242  
 <212> PRT  
 <213> Homo sapiens

<400> 4634

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          20           25           30
Ala Asn Leu Gly Lys Phe Leu Glu Leu Leu Arg Ser His Gln Ser Arg
          35           40           45
Pro Ala Lys Cys Leu Thr Ile Met Trp Ala Leu Gly Gln Ala Gly Phe
          50           55           60
Ala Asn Leu Thr Glu Gly Leu Lys Val Trp Leu Gly Ile Met Leu Pro
65           70           75           80
Val Leu Gly Ile Lys Ser Leu Ser Pro Phe Ala Ile Thr Tyr Leu Asp
          85           90           95
Arg Leu Leu Leu Met His Pro Asn Leu Thr Lys Gly Phe Gly Met Ile
          100          105          110
Gly Pro Lys Asp Phe Phe Pro Leu Leu Asp Phe Ala Tyr Met Pro Asn
          115          120          125
Asn Ser Leu Thr Pro Ser Leu Gln Glu Gln Leu Cys Gln Leu Tyr Pro
          130          135          140
Arg Leu Lys Val Leu Ala Phe Gly Ala Lys Pro Asp Ser Thr Leu His
145          150          155          160
Thr Tyr Phe Pro Ser Phe Leu Ser Arg Ala Thr Pro Ser Cys Pro Pro
          165          170          175
Glu Met Lys Lys Glu Leu Leu Ser Ser Leu Thr Glu Cys Leu Thr Val
          180          185          190
Asp Pro Leu Ser Ala Ser Val Trp Arg Gln Leu Tyr Pro Lys His Leu
          195          200          205
Ser Gln Ser Ser Leu Leu Leu Glu His Leu Leu Ser Ser Trp Glu Gln
          210          215          220
Ile Pro Lys Lys Val Gln Lys Ser Leu Gln Glu Thr Ile Gln Ser Leu
225          230          235          240
Lys Leu

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<210> 4635  
 <211> 384  
 <212> DNA  
 <213> Homo sapiens

<400> 4635

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300

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 384

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 <211> 108  
 <212> PRT  
 <213> Homo sapiens

<400> 4636  
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 Lys Glu Val Lys Trp Gly Pro Arg Arg Lys Ala Gly Gly Val Trp Ala  
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 Glu Pro Ala Ser Gly Gly Leu Pro Pro Pro Glu Asp Glu Phe Cys Ser  
 50 55 60  
 Pro Gly Val Cys Thr Leu Thr Leu Ala His Ser Leu Thr His Lys Thr  
 65 70 75 80  
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&lt;210&gt; 4638

&lt;211&gt; 446

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4638

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Thr Lys Ala Gly Tyr Lys Leu Phe Ser Leu Ser Ser Val Glu Gln Leu
      35           40           45
Asp Gln Val His Gly Ser Asn Glu Ile Pro Asp Val Tyr Ile Val Glu
      50           55           60
Arg Leu Phe Ser Ser Ser Leu Val Val Val Val Ser His Thr Lys Pro
      65           70           75           80
Arg Gln Met Asn Val Tyr His Phe Lys Lys Gly Thr Glu Ile Cys Asn
      85           90           95
Tyr Ser Tyr Ser Ser Asn Ile Leu Ser Ile Arg Leu Asn Arg Gln Arg
      100          105          110
Leu Leu Val Cys Leu Glu Glu Ser Ile Tyr Ile His Asn Ile Lys Asp
      115          120          125
Met Lys Leu Leu Lys Thr Leu Leu Asp Ile Pro Ala Asn Pro Thr Gly
      130          135          140
Leu Cys Ala Leu Ser Ile Asn His Ser Asn Ser Tyr Leu Ala Tyr Pro
      145          150          155          160
Gly Ser Leu Thr Ser Gly Glu Ile Val Leu Tyr Asp Gly Asn Ser Leu
      165          170          175
Lys Thr Val Cys Thr Ile Ala Ala His Glu Gly Thr Leu Ala Ala Ile
      180          185          190
Thr Phe Asn Ala Ser Gly Ser Lys Leu Ala Ser Ala Ser Glu Lys Gly
      195          200          205
Thr Val Ile Arg Val Phe Ser Val Pro Asp Gly Gln Lys Leu Tyr Glu
      210          215          220
Phe Arg Arg Gly Met Lys Arg Tyr Val Thr Ile Ser Ser Leu Val Phe
      225          230          235          240
Ser Met Asp Ser Gln Phe Leu Cys Ala Ser Ser Asn Thr Glu Thr Val
      245          250          255
His Ile Phe Lys Leu Glu Gln Val Thr Asn Ser Arg Pro Glu Glu Pro
      260          265          270
Ser Thr Trp Ser Gly Tyr Met Gly Lys Met Phe Met Ala Ala Thr Asn
      275          280          285
Tyr Leu Pro Thr Gln Val Ser Asp Met Met His Gln Asp Arg Ala Phe
      290          295          300
Ala Thr Ala Arg Leu Asn Phe Ser Gly Gln Arg Asn Ile Cys Thr Leu
      305          310          315          320
Ser Thr Ile Gln Lys Leu Pro Arg Leu Leu Val Ala Ser Ser Ser Gly
      325          330          335
His Leu Tyr Met Tyr Asn Leu Asp Pro Gln Asp Gly Gly Glu Cys Val
      340          345          350
Leu Ile Lys Thr His Ser Leu Leu Gly Ser Gly Thr Thr Glu Glu Asn
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Lys Glu Asn Asp Leu Arg Pro Ser Leu Pro Gln Ser Tyr Ala Ala Thr
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Val Ala Arg Pro Ser Ala Ser Ser Ala Ser Thr Val Pro Gly Tyr Ser

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 <212> PRT  
 <213> Homo sapiens

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 Leu Arg Arg Ser Phe Ala Leu Val Ala Gln Ala Arg Val Gln Trp Arg  
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<210> 4641

<211> 1873

<212> DNA

<213> Homo sapiens

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 <212> PRT  
 <213> Homo sapiens

<400> 4642  
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 Ser Lys Pro Asp Val Ser Glu Glu Ala Pro Gly Pro Ser Lys Val Lys  
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 Thr Gly Lys Pro Glu Glu Ala Ser Leu Asp Ser Arg Glu Lys Lys Thr  
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 Asn Leu Ala Pro Lys Ser Thr Ala Met Asn Glu Ser Ser Ser Gly Lys  
    245                                      250                                      255  
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 Cys Phe  
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&lt;211&gt; 1125

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4643

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<211> 270

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<213> Homo sapiens

<400> 4644

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Gln	Arg	Pro	Glu	Glu	Thr	Ser	Ala	Gln	Gly	Phe	Arg	Gln	Leu	Leu	Glu
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&lt;210&gt; 4645

&lt;211&gt; 1725

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4645

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<211> 358

<212> PRT

<213> Homo sapiens

<400> 4646

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		35					40					45			
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Pro	Arg	Gly	Ser	Asp	Ile	Ile	Val	Asp	Leu	Glu	Val	Thr	Leu	Glu	Glu
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Arg	Asp	Lys	Ile	Thr	Arg	Pro	Gly	Ala	Lys	Leu	Trp	Lys	Lys	Gly	Glu

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 Thr Phe Asp Val Asp Phe Pro Lys Glu Gln Leu Thr Glu Glu Ala Arg  
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 <212> DNA  
 <213> Homo sapiens

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 <212> PRT  
 <213> Homo sapiens

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	50					55					60						
Arg	Thr	Ile	Leu	Met	Arg	Lys	Glu	Gly	Glu	Ser	Ala	Lys	Ser	Ile	Asn		
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Glu	Met	Leu	Leu	Ser	Arg	Leu	Ser	Arg	Tyr	Arg	Ala	Ser	Pro	Ser	Ala		
				85					90					95			
Thr	Leu	Ala	Ala	Leu	Thr	Gly	Ser	Thr	Ile	Ser	Asn	Thr	Leu	Lys	Glu		
			100					105					110				
Asp	Gln	Ala	Ala	Asn	Thr	Ser	Cys	Gly	Leu	Pro	Leu	Lys	Met	Leu	Arg		
	115						120				125						
Lys	Thr	Pro	Ile	Tyr	Thr	Cys	Gly	Thr	Tyr	Leu	Val	Met	Leu	Val	Pro		
	130					135					140						
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&lt;211&gt; 3276

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4649

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&lt;210&gt; 4650

&lt;211&gt; 965

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4650

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Gly	Leu	Gln	Asp	Gln	Leu	Leu	Gly	Ile	Val	Ala	Ala	Lys	Glu	Lys	Pro
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Glu	Leu	Glu	Glu	Lys	Lys	Asn	Gln	Leu	Ile	Val	Glu	Ser	Ala	Lys	Asn
65				70					75					80	
Lys	Lys	His	Leu	Lys	Glu	Ile	Glu	Asp	Lys	Ile	Leu	Glu	Val	Leu	Ser
			85						90					95	
Met	Ser	Lys	Gly	Asn	Ile	Leu	Glu	Asp	Glu	Thr	Ala	Ile	Lys	Val	Leu
			100					105					110		
Ser	Ser	Ser	Lys	Val	Leu	Ser	Glu	Glu	Ile	Ser	Glu	Lys	Gln	Lys	Val
		115					120					125			
Ala	Ser	Met	Thr	Glu	Thr	Gln	Ile	Asp	Glu	Thr	Arg	Met	Gly	Tyr	Lys

3847

				565					570					575			
Leu	Thr	Gly	Glu	Cys	Asn	Tyr	Gly	Gly	Arg	Val	Thr	Asp	Asp	Lys	Asp		
			580					585					590				
Arg	Arg	Leu	Leu	Leu	Ser	Leu	Leu	Ser	Met	Phe	Tyr	Cys	Lys	Glu	Ile		
		595					600					605					
Glu	Glu	Asp	Tyr	Tyr	Ser	Leu	Ala	Pro	Gly	Asp	Thr	Tyr	Tyr	Ile	Pro		
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Pro	His	Gly	Ser	Tyr	Gln	Ser	Tyr	Ile	Asp	Tyr	Leu	Arg	Asn	Leu	Pro		
625					630				635					640			
Ile	Thr	Ala	His	Pro	Glu	Val	Phe	Gly	Leu	His	Glu	Asn	Ala	Asp	Ile		
			645					650						655			
Thr	Lys	Asp	Asn	Gln	Glu	Thr	Asn	Gln	Leu	Phe	Glu	Gly	Val	Leu	Leu		
			660					665					670				
Thr	Leu	Pro	Arg	Gln	Ser	Gly	Gly	Ser	Gly	Lys	Ser	Pro	Gln	Glu	Val		
		675				680						685					
Val	Glu	Glu	Leu	Ala	Gln	Asp	Ile	Leu	Ser	Lys	Leu	Pro	Arg	Asp	Phe		
	690				695						700						
Asp	Leu	Glu	Glu	Val	Met	Lys	Leu	Tyr	Pro	Val	Val	Tyr	Glu	Glu	Ser		
705					710				715					720			
Met	Asn	Thr	Val	Leu	Arg	Gln	Glu	Leu	Ile	Arg	Phe	Asn	Arg	Leu	Thr		
			725					730						735			
Lys	Val	Val	Arg	Arg	Ser	Leu	Ile	Asn	Leu	Gly	Arg	Ala	Ile	Lys	Gly		
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Gln	Val	Leu	Met	Ser	Ser	Glu	Leu	Glu	Glu	Val	Phe	Asn	Ser	Met	Leu		
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Val	Gly	Lys	Val	Pro	Ala	Met	Trp	Ala	Ala	Lys	Ser	Tyr	Pro	Ser	Leu		
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Lys	Pro	Leu	Gly	Gly	Tyr	Val	Ala	Asp	Leu	Leu	Ala	Arg	Leu	Thr	Phe		
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Phe	Gln	Glu	Trp	Ile	Asp	Lys	Gly	Pro	Pro	Val	Val	Phe	Trp	Ile	Ser		
			805					810						815			
Gly	Phe	Tyr	Phe	Thr	Gln	Ser	Phe	Leu	Thr	Gly	Val	Ser	Gln	Asn	Tyr		
			820					825					830				
Ala	Arg	Lys	Tyr	Thr	Ile	Pro	Ile	Asp	His	Ile	Gly	Phe	Glu	Phe	Glu		
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Val	Thr	Pro	Gln	Glu	Thr	Val	Met	Glu	Asn	Asn	Pro	Glu	Asp	Gly	Ala		
	850					855					860						
Tyr	Ile	Lys	Gly	Leu	Phe	Leu	Glu	Gly	Ala	Arg	Trp	Asp	Arg	Lys	Thr		
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Met	Gln	Ile	Gly	Glu	Ser	Leu	Pro	Lys	Ile	Leu	Tyr	Asp	Pro	Leu	Pro		
			885					890					895				
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		900						905					910				
Ile	Tyr	Val	Cys	Pro	Val	Tyr	Lys	Thr	Ser	Ala	Arg	Arg	Gly	Thr	Leu		
	915					920						925					
Ser	Thr	Thr	Gly	His	Ser	Thr	Asn	Tyr	Val	Leu	Ser	Ile	Glu	Leu	Pro		
	930					935						940					
Thr	Asp	Met	Pro	Gln	Lys	His	Trp	Ile	Asn	Arg	Gly	Val	Ala	Ser	Leu		
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Cys	Gln	Leu	Asp	Asn													
				965													

&lt;210&gt; 4651

&lt;211&gt; 869

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4651

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 gccggcgcca gtctggctcct gagcctgctg cagaggggtgg cgagctacgc gcggaaatgg  
 180  
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 240  
 ctgatgaagc cggacgggcg agaatttttt cagcagatca ttgagtacac agaggaatac  
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 660  
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 720  
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 780  
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 869

&lt;210&gt; 4652

&lt;211&gt; 289

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4652

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Met	Ala	Gly	Leu	Trp	Leu	Gly	Leu	Val	Trp	Gln	Lys	Leu	Leu	Leu	Trp	20	25	30	
Gly	Ala	Ala	Ser	Ala	Val	Ser	Leu	Ala	Gly	Ala	Ser	Leu	Val	Leu	Ser	35	40	45	
Leu	Leu	Gln	Arg	Val	Ala	Ser	Tyr	Ala	Arg	Lys	Trp	Gln	Gln	Met	Arg	50	55	60	
Pro	Ile	Pro	Thr	Val	Ala	Arg	Ala	Tyr	Pro	Leu	Val	Gly	His	Ala	Leu	65	70	75	80
Leu	Met	Lys	Pro	Asp	Gly	Arg	Glu	Phe	Phe	Gln	Gln	Ile	Ile	Glu	Tyr	85	90	95	
Thr	Glu	Glu	Tyr	Arg	His	Met	Pro	Leu	Leu	Lys	Leu	Trp	Val	Gly	Pro				

			100					105					110				
Val	Pro	Met	Val	Ala	Leu	Tyr	Asn	Ala	Glu	Asn	Val	Glu	Val	Ile	Leu		
			115					120					125				
Thr	Ser	Ser	Lys	Gln	Ile	Asp	Lys	Ser	Ser	Met	Tyr	Lys	Phe	Leu	Glu		
			130				135					140					
Pro	Trp	Leu	Gly	Leu	Gly	Leu	Leu	Thr	Ser	Thr	Gly	Asn	Lys	Trp	Arg		
145					150					155					160		
Ser	Arg	Arg	Lys	Met	Leu	Thr	Pro	Thr	Phe	His	Phe	Thr	Ile	Leu	Glu		
				165					170					175			
Asp	Phe	Leu	Asp	Ile	Met	Asn	Glu	Gln	Ala	Asn	Ile	Leu	Val	Lys	Lys		
			180					185					190				
Leu	Glu	Lys	His	Ile	Asn	Gln	Glu	Ala	Phe	Asn	Cys	Phe	Phe	Tyr	Ile		
		195					200					205					
Thr	Leu	Cys	Ala	Leu	Asp	Ile	Ile	Cys	Glu	Thr	Ala	Met	Gly	Lys	Asn		
		210				215					220						
Ile	Gly	Ala	Gln	Ser	Asn	Asp	Asp	Ser	Glu	Tyr	Val	Arg	Ala	Val	Tyr		
225					230					235					240		
Arg	Met	Ser	Glu	Met	Ile	Phe	Pro	Arg	Ile	Lys	Met	Pro	Trp	Leu	Trp		
				245				250						255			
Leu	Asp	Leu	Trp	Tyr	Leu	Met	Phe	Lys	Glu	Gly	Trp	Glu	His	Lys	Lys		
			260					265					270				
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 <211> 1276  
 <212> DNA  
 <213> Homo sapiens

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 120  
 gtttgaacct ctaacaaaaa ggaacgaaga tgccgaggag cctgcctacg gagacacggc  
 180  
 cagtaacgga gatccccaga tccacgtggg actcctgctc gacagtggca gcgagtgtct  
 240  
 cctcgtgcac gtgctgcagc tgaagaacct ggcggggctg gcggtgaagg aagactgcaa  
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 360  
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 420  
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 660

agcgacagtt caacgctgcc ccggaagtcc ccctttgtcc gaaatacttt ggaaagacga  
 720  
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 780  
 ctggacttgg agctggatct ccaggcgtcg agaacacggc agaggcagct gaatgaggag  
 840  
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 900  
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 960  
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 1020  
 aagaaggcct ccaaggagat ctaccagctg cgtgggcaga gccacaaaga gcccatccaa  
 1080  
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 1140  
 ctcccagccg acgacgtctg atggagtga ttgtgcacat gaagtattta tccacctgtt  
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 1276

&lt;210&gt; 4654

&lt;211&gt; 255

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4654

Met	Gly	Ile	Asp	Ser	Ile	Leu	Gly	His	Pro	Phe	Ala	Ala	Gln	Ala	Gly	1	5	10	15
Pro	Tyr	Ser	Pro	Glu	Lys	Phe	Gln	Pro	Ser	Pro	Leu	Lys	Val	Asp	Lys	20	25	30	
Glu	Thr	Asn	Thr	Glu	Asp	Leu	Phe	Leu	Glu	Glu	Ala	Ala	Ser	Leu	Val	35	40	45	
Lys	Glu	Arg	Pro	Ser	Arg	Arg	Ala	Arg	Gly	Ser	Pro	Phe	Val	Arg	Ser	50	55	60	
Gly	Thr	Ile	Val	Arg	Ser	Gln	Thr	Phe	Ser	Pro	Gly	Ala	Arg	Ser	Gln	65	70	75	80
Tyr	Val	Cys	Arg	Leu	Tyr	Arg	Ser	Asp	Ser	Asp	Ser	Ser	Thr	Leu	Pro	85	90	95	
Arg	Lys	Ser	Pro	Phe	Val	Arg	Asn	Thr	Leu	Glu	Arg	Arg	Thr	Leu	Arg	100	105	110	
Tyr	Lys	Gln	Ser	Cys	Arg	Ser	Ser	Leu	Ala	Glu	Leu	Met	Ala	Arg	Thr	115	120	125	
Ser	Leu	Asp	Leu	Glu	Leu	Asp	Leu	Gln	Ala	Ser	Arg	Thr	Arg	Gln	Arg	130	135	140	
Gln	Leu	Asn	Glu	Glu	Leu	Cys	Ala	Leu	Arg	Glu	Leu	Arg	Gln	Arg	Leu	145	150	155	160
Glu	Asp	Ala	Gln	Leu	Arg	Gly	Gln	Thr	Asp	Leu	Pro	Pro	Trp	Val	Leu	165	170	175	
Arg	Asp	Glu	Arg	Leu	Arg	Gly	Leu	Leu	Arg	Glu	Ala	Glu	Arg	Gln	Thr	180	185	190	
Arg	Gln	Thr	Lys	Leu	Asp	Tyr	Arg	His	Glu	Gln	Ala	Ala	Glu	Lys	Met				

195	200	205
Leu Lys Lys Ala Ser Lys Glu Ile Tyr Gln Leu Arg Gly Gln Ser His		
210	215	220
Lys Glu Pro Ile Gln Val Gln Thr Phe Arg Glu Lys Ile Ala Phe Phe		
225	230	235
Thr Arg Pro Arg Ile Asn Ile Pro Pro Leu Pro Ala Asp Asp Val		
245	250	255

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 <211> 456  
 <212> DNA  
 <213> Homo sapiens

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 120  
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 300  
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<210> 4656  
 <211> 152  
 <212> PRT  
 <213> Homo sapiens

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 Gln Gln Gln Arg Gln Arg Leu Ala Arg His Gly Val Arg Arg Ala Ala  
 35 40 45  
 Pro Arg Arg Leu Val Val Leu Glu Asp Glu Val Glu Leu Asp Leu Gln  
 50 55 60  
 His Glu Asp Val Lys Glu Pro Gln Asp His Gly Val Ala Ala Leu Gly  
 65 70 75 80  
 Arg Ala His Leu Gly Ala His Pro His Gly His Val Ala Gln His Gln  
 85 90 95  
 Gln Glu Ala His Val Ala His Gln His Asp Asp Ala His Ala Asp Leu  
 100 105 110  
 Ala Arg Ala Leu Val Leu Leu His Gln Val Arg Val His Asp Gly His  
 115 120 125  
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<210> 4657  
 <211> 723  
 <212> DNA  
 <213> Homo sapiens

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 gagtcaggcc tagggaaatc caccctcatc aacagcctct tcctcaccaa cctctatgag  
 180  
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 720  
 gta  
 723

<210> 4658  
 <211> 233  
 <212> PRT  
 <213> Homo sapiens

<400> 4658  
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 Glu Ser Gly Leu Gly Lys Ser Thr Leu Ile Asn Ser Leu Phe Leu Thr  
 35 40 45  
 Asn Leu Tyr Glu Asp Arg Gln Val Pro Glu Ala Ser Ala Arg Leu Thr  
 50 55 60  
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 65 70 75 80  
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180
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240
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720
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780
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840

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<210> 4660  
<211> 192  
<212> PRT  
<213> Homo sapiens

<400> 4660  
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Ser Val Arg Ala Phe His His Gln Phe Leu Glu Ser Thr His Gly Ser  
35 40 45  
Pro Ser Val Asp Ile Ser Leu Asp Leu Ala Lys Ser Thr Met Arg Thr  
50 55 60  
Ala Lys Ser Cys His Ile Val Ile Thr Asn Arg Ser Arg Asp Ala Ile  
65 70 75 80  
Ser Gly Pro Val Glu Ser Pro His Cys Asp Ala Cys Ser Thr Gln Thr  
85 90 95  
Ala Phe Ile His Ile Ser Cys Asn Leu Thr Pro Lys Ala Arg Glu Thr  
100 105 110  
Lys Cys Ala Thr Glu Thr Asp Ser Ala Val Ala Glu Thr Val Thr His  
115 120 125  
Ala Cys Leu Pro Val Gly Val Leu Gly Gly Arg Thr Gly Thr Asp Ser  
130 135 140  
Arg Leu Gly His Asn Asp His Arg Arg Leu Ser Leu His Phe Gln Cys  
145 150 155 160  
Arg Ala Phe His Val Val Phe Ile Cys Gly Glu Ile Leu Ser Gln Ala  
165 170 175  
Thr Arg His Phe Leu Leu Gly Thr Leu Phe Thr Asn Phe His Cys Phe  
180 185 190

<210> 4661  
<211> 153  
<212> DNA  
<213> Homo sapiens

<400> 4661  
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153

<210> 4662  
<211> 51  
<212> PRT  
<213> Homo sapiens

<400> 4662  
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<210> 4663  
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 <212> DNA  
 <213> Homo sapiens

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 cagacggatg acccaggccc cctcgatggc cctgacctcc aggccagcca ctcagagctc  
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 720  
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&lt;210&gt; 4664

&lt;211&gt; 347

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4664

Met	Phe	Arg	His	Thr	Asp	Ser	Leu	Phe	Pro	Ile	Leu	Leu	Gln	Thr	Leu
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Ser	Asp	Glu	Ser	Asp	Glu	Val	Ile	Leu	Lys	Asp	Leu	Glu	Val	Leu	Ala
			20					25					30		
Glu	Ile	Ala	Ser	Ser	Pro	Ala	Gly	Gln	Thr	Asp	Asp	Pro	Gly	Pro	Leu
		35					40					45			
Asp	Gly	Pro	Asp	Leu	Gln	Ala	Ser	His	Ser	Glu	Leu	Gln	Val	Pro	Thr
	50					55				60					
Pro	Gly	Arg	Ala	Gly	Leu	Leu	Asn	Thr	Ser	Gly	Thr	Lys	Gly	Leu	Glu
65					70					75				80	
Cys	Ser	Pro	Ser	Thr	Pro	Thr	Met	Asn	Ser	Tyr	Phe	Tyr	Lys	Phe	Met
			85					90					95		
Ile	Asn	Leu	Leu	Lys	Arg	Phe	Ser	Ser	Glu	Arg	Lys	Leu	Leu	Glu	Val
		100						105					110		
Arg	Gly	Pro	Phe	Ile	Ile	Arg	Gln	Leu	Cys	Leu	Leu	Leu	Asn	Ala	Glu
	115						120					125			
Asn	Ile	Phe	His	Ser	Met	Ala	Asp	Ile	Leu	Leu	Arg	Glu	Glu	Asp	Leu
	130					135					140				
Lys	Phe	Ala	Ser	Thr	Met	Val	His	Ala	Leu	Asn	Thr	Ile	Leu	Leu	Thr
145					150					155				160	
Ser	Thr	Glu	Leu	Phe	Gln	Leu	Arg	Asn	Gln	Leu	Lys	Asp	Leu	Lys	Thr
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Leu	Glu	Ser	Gln	Asn	Leu	Phe	Cys	Cys	Leu	Tyr	Arg	Ser	Trp	Cys	His
		180					185						190		
Asn	Pro	Val	Thr	Thr	Val	Ser	Leu	Cys	Phe	Leu	Thr	Gln	Asn	Tyr	Arg
	195						200					205			
His	Ala	Tyr	Asp	Leu	Ile	Gln	Lys	Phe	Gly	Asp	Leu	Glu	Val	Thr	Val
	210					215					220				
Asp	Phe	Leu	Ala	Glu	Val	Asp	Lys	Leu	Val	Gln	Leu	Ile	Glu	Cys	Pro
225				230						235				240	
Ile	Phe	Thr	Tyr	Leu	Arg	Leu	Gln	Leu	Leu	Asp	Val	Lys	Asn	Asn	Pro
			245					250					255		
Tyr	Leu	Ile	Lys	Ala	Leu	Tyr	Gly	Leu	Leu	Met	Leu	Leu	Pro	Gln	Ser
	260						265					270			
Ser	Ala	Phe	Gln	Leu	Leu	Ser	His	Arg	Leu	Gln	Cys	Val	Pro	Asn	Pro

	275		280		285										
Glu	Leu	Leu	Gln	Thr	Glu	Asp	Ser	Leu	Lys	Ala	Ala	Pro	Lys	Ser	Gln
	290				295						300				
Lys	Ala	Asp	Ser	Pro	Ser	Ile	Asp	Tyr	Ala	Glu	Leu	Leu	Gln	His	Phe
305					310					315					320
Glu	Lys	Val	Gln	Asn	Lys	His	Leu	Glu	Val	Arg	His	Gln	Arg	Ser	Gly
				325					330					335	
Arg	Gly	Asp	His	Leu	Asp	Arg	Arg	Val	Val	Leu					
				340					345						

&lt;210&gt; 4665

&lt;211&gt; 1043

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4665

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180
tgtccacctt tacgaagccg agcatacaca ccacctgaag atctccagag tcgtttggaa
240
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300
gaagatagtc gtctaaagtt caatcttctg gctcatttag ctgatgactt gggtcatgta
360
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420
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780
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1020
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1043

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&lt;210&gt; 4666

<211> 167  
 <212> PRT  
 <213> Homo sapiens

<400> 4666  
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 20 25 30  
 Arg Glu Phe Trp Ser Arg Phe Arg Lys Glu Lys Glu Pro Val Val Val  
 35 40 45  
 Glu Thr Val Glu Glu Lys Lys Glu Pro Ile Leu Val Cys Pro Pro Leu  
 50 55 60  
 Arg Ser Arg Ala Tyr Thr Pro Pro Glu Asp Leu Gln Ser Arg Leu Glu  
 65 70 75 80  
 Ser Tyr Val Lys Glu Val Phe Gly Ser Ser Leu Pro Ser Asn Trp Gln  
 85 90 95  
 Asp Ile Ser Leu Glu Asp Ser Arg Leu Lys Phe Asn Leu Leu Ala His  
 100 105 110  
 Leu Ala Asp Asp Leu Gly His Val Val Pro Asn Ser Arg Leu His Gln  
 115 120 125  
 Met Cys Arg Val Arg Asp Val Leu Asp Phe Tyr Asn Val Pro Ile Gln  
 130 135 140  
 Asp Arg Ser Lys Phe Asp Glu Leu Ser Ala Ser Asn Leu Pro Pro Asn  
 145 150 155 160  
 Leu Lys Ile Thr Trp Ser Tyr  
 165

<210> 4667  
 <211> 1031  
 <212> DNA  
 <213> Homo sapiens

<400> 4667  
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 tcagatgcca ccaacattga ggcttccatc agagaggagg acagcttcta tgtcataaac  
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 360  
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 420  
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gctttccccc gcaccagca ctgactcaga accaccacct tctgctttgc tgtcggactt  
 660  
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 720  
 aagaagttgc attcctgtct gctttgcac tgctactttg ctgcagtttg gattcagagc  
 780  
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 900  
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 1031

<210> 4668  
 <211> 207  
 <212> PRT  
 <213> Homo sapiens

<400> 4668  
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 Ala Pro Asp Thr Gly Asn Met Glu Leu Leu Val Arg Tyr Gly Thr Glu  
 20 25 30  
 Ala Gln Lys Ala Arg Trp Leu Ile Pro Leu Leu Glu Gly Lys Ala Arg  
 35 40 45  
 Ser Cys Phe Ala Met Thr Glu Pro Gln Val Ala Ser Ser Asp Ala Thr  
 50 55 60  
 Asn Ile Glu Ala Ser Ile Arg Glu Glu Asp Ser Phe Tyr Val Ile Asn  
 65 70 75 80  
 Gly His Lys Trp Trp Ile Thr Gly Ile Leu Asp Pro Arg Cys Gln Leu  
 85 90 95  
 Cys Val Phe Met Gly Lys Thr Asp Pro His Ala Pro Arg His Arg Gln  
 100 105 110  
 Gln Ser Val Leu Leu Val Pro Met Asp Thr Pro Gly Ile Lys Ile Ile  
 115 120 125  
 Arg Pro Leu Thr Val Tyr Gly Leu Glu Asp Ala Pro Gly Gly His Gly  
 130 135 140  
 Glu Val Arg Phe Glu His Val Arg Val Pro Lys Glu Asn Met Val Leu  
 145 150 155 160  
 Gly Pro Gly Arg Gly Phe Glu Ile Ala Gln Gly Arg Leu Gly Pro Gly  
 165 170 175  
 Arg Ile His His Cys Met Arg Leu Ile Gly Phe Ser Glu Arg Ala Leu  
 180 185 190  
 Ala Leu Met Lys Ala Arg Val Ser Ala Phe Pro Arg Thr Gln His  
 195 200 205

<210> 4669  
 <211> 683  
 <212> DNA  
 <213> Homo sapiens

<400> 4669  
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 120  
 gacatgaaca taaaaaaaca gattcaggaa cagcaccagg ctgccattat tattcagaag  
 180  
 cattgtaaag ccttttaaata aaggaagcat tatctccaca ttagagcaac agtagtttct  
 240  
 attcaaagaa gatacagaaa actaactgca gtgcgtaccc aagcagttat ttgtatacag  
 300  
 tcttattaca gaggctttta agtacgaaag gatattcaaa atatgcaccg ggctgccaca  
 360  
 ctaattcagt cattctatcg aatgcacagg gccaaagttg attattaaac aaagaaaact  
 420  
 gcaattgtgg ttatacagaa ttattatagg ttgtatgtta gagtaaaaac agaaagaaaa  
 480  
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 540  
 gttagacaaa aattgaaaaa atgtatcaga ggaaaagatg gcagccattg ttaaccaatc  
 600  
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 gattcaagag tgggtataaag ctt  
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<210> 4670  
 <211> 135  
 <212> PRT  
 <213> Homo sapiens

<400> 4670  
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 20 25 30  
 Thr Cys Val Gln Ala Gly Phe Gln Asp Met Asn Ile Lys Lys Gln Ile  
 35 40 45  
 Gln Glu Gln His Gln Ala Ala Ile Ile Ile Gln Lys His Cys Lys Ala  
 50 55 60  
 Phe Lys Ile Arg Lys His Tyr Leu His Ile Arg Ala Thr Val Val Ser  
 65 70 75 80  
 Ile Gln Arg Arg Tyr Arg Lys Leu Thr Ala Val Arg Thr Gln Ala Val  
 85 90 95  
 Ile Cys Ile Gln Ser Tyr Tyr Arg Gly Phe Lys Val Arg Lys Asp Ile  
 100 105 110  
 Gln Asn Met His Arg Ala Ala Thr Leu Ile Gln Ser Phe Tyr Arg Met  
 115 120 125  
 His Arg Ala Lys Val Asp Tyr  
 130 135

<210> 4671  
 <211> 657

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4671

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120  
ggggctcggc aggggctacc cggctccgct tccgccagc aatggagact gcagccacgt  
180  
taggccaggc tgctgcagtg gtttcagcat ctatccgcag ggatccacgg ggaagctggt  
240  
gtgcgccgga taaagatggc aaccgccgat gagattgtga aactcatgct cgaccacatg  
300  
acaaacacca ccaacgcgtc ccatgtgcct gtgcagcccg gctcctcagt tgtgatgatg  
360  
gtcaacaacc tgggtggcct gtcattcctg gaactgggca tcatagccga cgctaccgtc  
420  
cgctccctgg agggccgcgg ggtgaagatt gcccgcgccc tgggtgggcac ctccatgtca  
480  
gcactggaga tgctggcat ttctctcacc ctctgctgg tggatgagcc tctcctgaaa  
540  
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600  
aacgggtgtg cagcactctc ctgggcctgg aggaacacct gaatgccctg gaccggt  
657

&lt;210&gt; 4672

&lt;211&gt; 152

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4672

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1				5					10					15	
Glu	Ala	Gly	Val	Arg	Arg	Ile	Lys	Met	Ala	Thr	Ala	Asp	Glu	Ile	Val
			20					25					30		
Lys	Leu	Met	Leu	Asp	His	Met	Thr	Asn	Thr	Thr	Asn	Ala	Ser	His	Val
		35					40					45			
Pro	Val	Gln	Pro	Gly	Ser	Ser	Val	Val	Met	Met	Val	Asn	Asn	Leu	Gly
		50				55					60				
Gly	Leu	Ser	Phe	Leu	Glu	Leu	Gly	Ile	Ile	Ala	Asp	Ala	Thr	Val	Arg
65					70					75				80	
Ser	Leu	Glu	Gly	Arg	Gly	Val	Lys	Ile	Ala	Arg	Ala	Leu	Val	Gly	Thr
			85					90						95	
Phe	Met	Ser	Ala	Leu	Glu	Met	Pro	Gly	Ile	Ser	Leu	Thr	Leu	Leu	Leu
			100					105					110		
Val	Asp	Glu	Pro	Leu	Leu	Lys	Leu	Ile	Asp	Ala	Glu	Thr	Thr	Ala	Ala
		115					120					125			
Ala	Trp	Pro	Arg	Ser	Gly	Trp	Arg	Trp	Cys	Trp	Asn	Gly	Cys	Ala	Ala
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Leu	Ser	Trp	Ala	Trp	Arg	Asn	Thr								
145					150										

<210> 4673  
<211> 1335  
<212> DNA  
<213> Homo sapiens

<400> 4673  
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300  
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360  
atcaaagggtt cttgcttcca aagtgggaat aaacggaacc atgaaccttt tattgctcca  
420  
gaaagatttg gaaacagtag tgtgggcttt ggcagtaatt cccattccca agcaccagag  
480  
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600  
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660  
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720  
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780  
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900  
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cgcattggaa ttgaaggtta ccctacctgt aaagaaaaaa ttaagagaag gcctggcggc  
1140  
cgttctgaag tcattctataa ttatgtacaa cgccccctca tccagatgtc atgggaaaag  
1200  
gaagaaggga agagtcgcca tgtggatttc cagtgtgttc gaagcaaata cctcacgaat  
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1335

<210> 4674

<211> 402  
 <212> PRT  
 <213> Homo sapiens

<400> 4674

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 20          25          30
Ala Asn Ser Leu Ala Ser Ser Gly Pro His Asn Leu Thr Tyr Pro Leu
 35          40          45
Gly Pro Arg Asn Glu Asp Leu Ser Leu Asp Tyr Ala Ser Gln Pro Ala
 50          55          60
Asn Leu Gln Phe Pro His Ile Met Pro Leu Ala Glu Asp Ile Lys Gly
 65          70          75          80
Ser Cys Phe Gln Ser Gly Asn Lys Arg Asn His Glu Pro Phe Ile Ala
 85          90          95
Pro Glu Arg Phe Gly Asn Ser Ser Val Gly Phe Gly Ser Asn Ser His
 100         105         110
Ser Gln Ala Pro Glu Lys Val Thr Leu Leu Val Asp Gly Thr Arg Phe
 115         120         125
Val Val Asn Pro Gln Ile Phe Thr Ala His Pro Asp Thr Met Leu Gly
 130         135         140
Arg Met Phe Gly Pro Gly Arg Glu Tyr Asn Phe Thr Arg Pro Asn Glu
 145         150         155         160
Lys Gly Glu Tyr Glu Ile Ala Glu Gly Ile Ser Ala Thr Val Phe Arg
 165         170         175
Thr Val Leu Asp Tyr Tyr Lys Thr Gly Ile Ile Asn Cys Pro Asp Gly
 180         185         190
Ile Ser Ile Pro Asp Leu Arg Asp Thr Cys Asp Tyr Leu Cys Ile Asn
 195         200         205
Phe Asp Phe Asn Thr Ile Arg Cys Gln Asp Leu Ser Ala Leu Leu His
 210         215         220
Glu Leu Ser Asn Asp Gly Ala His Lys Gln Phe Asp His Tyr Leu Glu
 225         230         235         240
Glu Leu Ile Leu Pro Ile Met Val Gly Cys Ala Lys Lys Gly Glu Arg
 245         250         255
Glu Cys His Ile Val Val Leu Thr Asp Glu Asp Ser Val Asp Trp Asp
 260         265         270
Glu Asp His Pro Pro Pro Met Gly Glu Glu Tyr Ser Gln Ile Leu Tyr
 275         280         285
Ser Ser Lys Leu Tyr Arg Phe Phe Lys Tyr Ile Glu Asn Arg Asp Val
 290         295         300
Ala Lys Thr Val Leu Lys Glu Arg Gly Leu Lys Asn Ile Arg Ile Gly
 305         310         315         320
Ile Glu Gly Tyr Pro Thr Cys Lys Glu Lys Ile Lys Arg Arg Pro Gly
 325         330         335
Gly Arg Ser Glu Val Ile Tyr Asn Tyr Val Gln Arg Pro Phe Ile Gln
 340         345         350
Met Ser Trp Glu Lys Glu Glu Gly Lys Ser Arg His Val Asp Phe Gln
 355         360         365
Cys Val Arg Ser Lys Ser Leu Thr Asn Leu Val Ala Ala Gly Asp Asp
 370         375         380
Val Leu Glu Asp Gln Glu Ile Leu Met His His Pro Pro Gln Val Asp

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Glu Leu

390

395

400

<210> 4675  
<211> 2868  
<212> DNA  
<213> Homo sapiens

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420  
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&lt;211&gt; 940

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4677

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2700  
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2880  
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3060

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 3246

<210> 4684  
 <211> 385  
 <212> PRT  
 <213> Homo sapiens

<400> 4684  
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 35 40 45  
 Gln Thr His Gly Thr Ala Arg Ile Gly Thr His Asn Gly Thr Phe His  
 50 55 60  
 Cys Asp Glu Ala Leu Ala Cys Ala Leu Leu Arg Leu Leu Pro Glu Tyr  
 65 70 75 80  
 Arg Asp Ala Glu Ile Val Arg Thr Arg Asp Pro Glu Lys Leu Ala Ser  
 85 90 95  
 Cys Asp Ile Val Val Asp Val Gly Gly Glu Tyr Asp Pro Arg Arg His  
 100 105 110  
 Arg Tyr Asp His His Gln Arg Ser Phe Thr Glu Thr Met Ser Ser Leu  
 115 120 125  
 Ser Pro Gly Lys Pro Trp Gln Thr Lys Leu Ser Ser Ala Gly Leu Ile  
 130 135 140  
 Tyr Leu His Phe Gly His Lys Leu Leu Ala Gln Leu Leu Gly Thr Ser  
 145 150 155 160  
 Glu Glu Asp Ser Met Val Gly Thr Leu Tyr Asp Lys Met Tyr Glu Asn  
 165 170 175  
 Phe Val Glu Glu Val Asp Ala Val Asp Asn Gly Ile Ser Gln Trp Ala  
 180 185 190  
 Glu Gly Glu Pro Arg Tyr Ala Leu Thr Thr Thr Leu Ser Ala Arg Val  
 195 200 205  
 Ala Arg Leu Asn Pro Thr Trp Asn His Pro Asp Gln Asp Thr Glu Ala  
 210 215 220  
 Gly Phe Lys Arg Ala Met Asp Leu Val Gln Glu Glu Phe Leu Gln Arg  
 225 230 235 240  
 Leu Asp Phe Tyr Gln His Ser Trp Leu Pro Ala Arg Ala Leu Val Glu  
 245 250 255  
 Glu Ala Leu Ala Gln Arg Phe Gln Val Asp Pro Ser Gly Glu Ile Val  
 260 265 270  
 Glu Leu Ala Lys Gly Ala Cys Pro Trp Lys Glu His Leu Tyr His Leu  
 275 280 285  
 Glu Ser Gly Leu Ser Pro Pro Val Ala Ile Phe Phe Val Ile Tyr Thr  
 290 295 300  
 Asp Gln Ala Gly Gln Trp Arg Ile Gln Cys Val Pro Lys Glu Pro His



305                                      310                                      315                                      320  
 Ser Phe Gln Ser Arg Leu Pro Leu Pro Glu Pro Trp Arg Gly Leu Arg  
    325                                      330                                      335  
 Asp Glu Ala Leu Asp Gln Val Ser Gly Ile Pro Gly Cys Ile Phe Val  
    340                                      345                                      350  
 His Ala Ser Gly Phe Ile Gly Gly His Arg Thr Arg Glu Gly Ala Leu  
    355                                      360                                      365  
 Ser Met Ala Arg Ala Thr Leu Ala Gln Arg Ser Tyr Leu Pro Gln Ile  
    370                                      375                                      380  
 Ser  
 385

<210> 4685  
 <211> 618  
 <212> DNA  
 <213> Homo sapiens

<400> 4685  
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 420  
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 480  
 gccccaggagg acagagaaaa agggcagatg ccccatagct gactgctcgg ctccccccgc  
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<210> 4686  
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 <212> PRT  
 <213> Homo sapiens

<400> 4686  
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   20  25  30  
 Ser Gly Leu Ser Leu Gln Glu Ala Gln Gln Ile Leu Asn Val Ser Lys  
   35  40  45  
 Leu Ser Pro Glu Glu Val Gln Lys Asn Tyr Glu His Leu Phe Lys Val

50	55	60
Asn Asp Lys Ser Val Gly Gly Ser Phe Tyr Leu Gln Ser Lys Val Val		
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Arg Ala Lys Glu Arg Leu Asp Glu Glu Leu Lys Ile Gln Ala Gln Glu		80
	85	90
Asp Arg Glu Lys Gly Gln Met Pro His Thr		95
100	105	

<210> 4687  
 <211> 309  
 <212> DNA  
 <213> Homo sapiens

<400> 4687  
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 120  
 cggcgctctc gcacccccctg tgggtggcat tgatgagcgc cctaactctg ggtctgcttt  
 180  
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 309

<210> 4688  
 <211> 90  
 <212> PRT  
 <213> Homo sapiens

<400> 4688
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Ala Leu Pro Val Ser Tyr Ala Leu Asn His Val Ser Ala Leu Ser His
20 25 30
Pro Leu Trp Val Ala Leu Met Ser Ala Leu Ile Leu Gly Leu Leu Phe
35 40 45
Val Ala Val Tyr Ser Leu Ser His Gly Glu Val Ser Tyr Asp Pro Leu
50 55 60
Tyr Ala Gly Phe Ala Val Phe Ala Phe Thr Ser Gly Gly Asp Leu Ile
65 70 75 80
Ile Ala Leu Gln Glu Asp Ser Tyr Gly Gly
85 90

<210> 4689  
 <211> 898  
 <212> DNA  
 <213> Homo sapiens

<400> 4689  
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 180  
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 240  
 gtgggcagtc ggccatacac cgagttcccc ttccggccagc acagctcggg tgaggctgcc  
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 360  
 gtctatgcca aggaacagct gtttgctgaa gcatcaggtg cccggccagg ggtgccc aaa  
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 gtgctggtgt ggggtgacaga tggcggtcc agcgacctg tgggcccccc catgcaggag  
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 660  
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 720  
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 780  
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 898

&lt;210&gt; 4690

&lt;211&gt; 299

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4690

Xaa	Pro	Arg	Pro	Ser	Arg	Arg	Ile	Ala	Pro	Leu	Asp	Gly	Ala	Arg	Leu
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			20					25					30		
Ser	Ala	Pro	Glu	Asp	Leu	Met	Phe	Leu	Leu	Asp	Ser	Ser	Ala	Ser	Val
		35					40					45			
Ser	His	Tyr	Glu	Phe	Ser	Arg	Val	Arg	Glu	Phe	Val	Gly	Gln	Leu	Val
	50					55					60				
Ala	Pro	Leu	Pro	Leu	Ala	Pro	Xaa	Ala	Leu	Arg	Ala	Ser	Leu	Val	His
65					70					75				80	
Val	Gly	Ser	Arg	Pro	Tyr	Thr	Glu	Phe	Pro	Phe	Gly	Gln	His	Ser	Ser
			85						90					95	
Gly	Glu	Ala	Ala	Gln	Asp	Ala	Val	Arg	Ala	Ser	Ala	Gln	Arg	Met	Gly
		100					105					110			
Asp	Thr	His	Thr	Gly	Leu	Ala	Leu	Val	Tyr	Ala	Lys	Glu	Gln	Leu	Phe
	115						120					125			
Ala	Glu	Ala	Ser	Gly	Ala	Arg	Pro	Gly	Val	Pro	Lys	Val	Leu	Val	Trp
	130					135					140				
Val	Thr	Asp	Gly	Gly	Ser	Ser	Asp	Pro	Val	Gly	Pro	Pro	Met	Gln	Glu

145                      150                      155                      160  
 Leu Lys Asp Leu Gly Val Thr Val Phe Ile Val Ser Thr Gly Arg Gly  
                                  165                      170                      175  
 Asn Phe Leu Glu Leu Ser Ala Ala Ala Ser Ala Pro Ala Glu Lys His  
                                  180                      185                      190  
 Leu His Phe Val Asp Val Asp Asp Leu His Ile Ile Val Gln Glu Leu  
                                  195                      200                      205  
 Arg Gly Ser Ile Leu Asp Ala Met Arg Pro Gln Gln Leu His Ala Thr  
                                  210                      215                      220  
 Glu Ile Thr Ser Ser Gly Phe Arg Leu Ala Trp Pro Pro Leu Leu Thr  
 225                      230                      235                      240  
 Ala Asp Ser Gly Tyr Tyr Val Leu Glu Leu Val Pro Ser Ala Gln Pro  
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 Gly Ala Ala Arg Arg Gln Gln Leu Pro Gly Asn Ala Thr Asp Trp Ile  
                                  260                      265                      270  
 Trp Ala Gly Leu Asp Pro Asp Thr Asp Tyr Asp Val Ala Leu Val Pro  
                                  275                      280                      285  
 Glu Ser Asn Val Arg Leu Leu Arg Pro Gln Ile  
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<210> 4691  
 <211> 2375  
 <212> DNA  
 <213> Homo sapiens

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 180  
 aatagcactt ttgctattgc ctgtcttcag agggctttga atttagctcc acttcaatac  
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 300  
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 720  
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 780  
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 840

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1020  
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1140  
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1380  
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1920  
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2280  
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&lt;210&gt; 4692

<211> 383  
<212> PRT  
<213> Homo sapiens

<400> 4692

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			20					25					30		
Phe	Leu	Phe	His	Ala	Ile	Asn	Lys	Pro	Asn	Ala	Pro	Ile	Trp	Leu	Ile
		35					40					45			
Leu	Asn	Glu	Ala	Gly	Leu	Tyr	Trp	Arg	Ala	Val	Gly	Asn	Ser	Thr	Phe
	50					55					60				
Ala	Ile	Ala	Cys	Leu	Gln	Arg	Ala	Leu	Asn	Leu	Ala	Pro	Leu	Gln	Tyr
65					70				75					80	
Gln	Asp	Val	Pro	Leu	Val	Asn	Leu	Ala	Asn	Leu	Leu	Ile	His	Tyr	Gly
			85						90				95		
Leu	His	Leu	Asp	Ala	Thr	Lys	Leu	Leu	Leu	Gln	Ala	Leu	Ala	Ile	Asn
			100					105					110		
Ser	Ser	Glu	Pro	Leu	Thr	Phe	Leu	Ser	Leu	Gly	Asn	Ala	Tyr	Leu	Ala
		115					120					125			
Leu	Lys	Asn	Ile	Ser	Gly	Ala	Leu	Glu	Ala	Phe	Arg	Gln	Ala	Leu	Lys
	130					135					140				
Leu	Thr	Thr	Lys	Cys	Pro	Glu	Cys	Glu	Asn	Ser	Leu	Lys	Leu	Ile	Arg
145					150					155				160	
Cys	Met	Gln	Phe	Tyr	Pro	Phe	Leu	Tyr	Asn	Ile	Thr	Ser	Ser	Val	Cys
			165						170					175	
Ser	Gly	Asn	Cys	His	Glu	Lys	Thr	Leu	Asp	Asn	Ser	His	Asp	Lys	Gln
		180						185					190		
Lys	Tyr	Phe	Asp	Asn	Ser	Gln	Ser	Leu	Asp	Ala	Ala	Glu	Glu	Glu	Pro
	195						200					205			
Ser	Glu	Arg	Gly	Thr	Glu	Glu	Asp	Pro	Val	Phe	Ser	Val	Glu	Asn	Ser
	210					215					220				
Gly	Arg	Asp	Ser	Asp	Ala	Leu	Arg	Leu	Glu	Ser	Thr	Val	Val	Glu	Glu
225					230					235				240	
Ser	Asn	Gly	Ser	Asp	Glu	Met	Glu	Asn	Ser	Asp	Glu	Thr	Lys	Met	Ser
			245						250				255		
Glu	Glu	Ile	Leu	Ala	Leu	Val	Asp	Glu	Phe	Gln	Gln	Ala	Trp	Pro	Leu
		260						265					270		
Glu	Gly	Phe	Gly	Gly	Ala	Leu	Glu	Met	Lys	Gly	Arg	Arg	Leu	Asp	Leu
	275						280					285			
Gln	Gly	Ile	Arg	Val	Leu	Lys	Lys	Gly	Pro	Gln	Asp	Gly	Val	Ala	Arg
	290					295					300				
Ser	Ser	Cys	Tyr	Gly	Asp	Cys	Arg	Ser	Glu	Asp	Asp	Glu	Ala	Thr	Glu
305					310					315				320	
Trp	Ile	Thr	Phe	Gln	Val	Lys	Arg	Val	Lys	Lys	Pro	Lys	Gly	Asp	His
			325						330				335		
Lys	Lys	Thr	Pro	Gly	Lys	Lys	Val	Glu	Thr	Gly	Gln	Ile	Glu	Asn	Gly
		340						345					350		
His	Arg	Tyr	Gln	Ala	Asn	Leu	Glu	Ile	Thr	Gly	Pro	Lys	Val	Ala	Ser
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Pro	Gly	Pro	Gln	Gly	Leu	Leu	Asp	Trp	Lys	Thr	Arg	Lys	Val	Pro	
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<210> 4693  
 <211> 794  
 <212> DNA  
 <213> Homo sapiens

<400> 4693  
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<210> 4694  
 <211> 103  
 <212> PRT  
 <213> Homo sapiens

<400> 4694  
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 Asn Ser Gly Val Gly Gln Asp Gly Ser Leu Leu Ser Ser Pro Phe Leu  
 35 40 45  
 Lys Gly Phe Leu Ala Gly Tyr Val Val Ala Lys Leu Arg Ala Ser Ala  
 50 55 60  
 Val Leu Gly Phe Ala Val Gly Thr Cys Thr Gly Ile Tyr Ala Ala Gln  
 65 70 75 80  
 Ala Tyr Ala Val Pro Asn Val Glu Lys Thr Leu Arg Asp Tyr Leu Gln  
 85 90 95  
 Leu Leu Arg Lys Gly Pro Asp

100

&lt;210&gt; 4695

&lt;211&gt; 2209

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4695

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240  
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3883



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<210> 4696

<211> 302

<212> PRT

<213> Homo sapiens

<400> 4696

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Trp	Leu	Lys	Glu	Gly	Pro	Pro	Pro	Ala	Ser	Pro	Ala	Gln	Leu	Leu	Ser

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Met	Gln	Lys	Tyr	Gly	Lys	Ala	Ala	Pro	Gly	Asp	Arg	Thr	Met	Leu	Asp
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Ser	Leu	Trp	Ala	Ala	Glu	Gln	Glu	Leu	Gln	Ala	Trp	Lys	Ser	Pro	Gly
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Ala	Ala	Glu	Ala	Thr	Lys	Asn	Met	Glu	Ala	Gly	Ala	Gly	Arg	Ala	Ser
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Tyr	Ile	Ser	Ser	Ala	Arg	Leu	Glu	Gln	Pro	Asp	Pro	Gly	Ala	Val	Ala
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 <211> 1047  
 <212> DNA  
 <213> Homo sapiens

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 <211> 182  
 <212> PRT  
 <213> Homo sapiens

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 35 40 45  
 Pro Ser Cys Leu Pro Gly Ile Ser Ile Asn Ser Glu Gln Leu Thr Arg  
 50 55 60  
 Ala Gln Cys Val Thr Val Lys Glu Lys Leu Leu Glu Gln Ala Glu Ser  
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 85 90 95  
 Asn Leu Arg His Ile Leu Ser Gln Pro Glu Thr Gly Ser Gly Ser Glu  
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 Lys Cys Thr Phe Ser Thr Ser Thr Thr Met Asp Asp Gly Leu Trp Ile  
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<210> 4699  
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 <212> DNA  
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&lt;210&gt; 4700

&lt;211&gt; 116

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4700

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<400> 4702  
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Ala Lys Asn Gly Val Gln Trp Cys Asn Val Gly Ser Leu Gln Pro Lys
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Pro Pro Gly Leu Lys
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&lt;210&gt; 4703

&lt;211&gt; 513

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4703

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&lt;210&gt; 4704

&lt;211&gt; 112

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4704

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      20           25           30
His Leu Pro Ala Glu Leu Thr Ala Glu Glu Lys Glu Asp Leu Leu Lys
      35           40           45
Tyr Phe Gly Ala Gln Ser Val Arg Val Leu Ser Asp Lys Gly Arg Leu
      50           55           60
Lys His Thr Ala Phe Ala Thr Phe Pro Asn Glu Lys Ala Ala Ile Lys
      65           70           75           80
Ala Leu Thr Arg Leu His Gln Leu Lys Leu Leu Gly His Thr Leu Val
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Val Glu Phe Ala Lys Glu Gln Asp Arg Val His Ser Pro Cys Pro Thr

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<210> 4705  
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 <212> DNA  
 <213> Homo sapiens

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<210> 4706  
 <211> 154  
 <212> PRT  
 <213> Homo sapiens

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 35 40 45  
 Val Met Ile Tyr Asp Ala Glu Lys Gln Arg Pro Arg Gly Lys Gly Arg  
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 Ser Ser Leu Thr Ser Ala Phe Ser Leu Leu Leu Pro Gln Met Ala Asn  
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 Tyr Leu Thr Arg Gln Ala His Thr Gly Gly Gly Cys Ser Lys Gln Pro  
 85 90 95  
 Gln Glu Gly Thr Ile Trp Arg Gln Met Thr Lys Thr Trp Ala Pro His  
 100 105 110  
 Val His Pro Ile Gln Pro Val Cys Ala Ser Arg Gly Gln Thr Ser His  
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<210> 4707  
 <211> 748  
 <212> DNA  
 <213> Homo sapiens

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 <211> 128  
 <212> PRT  
 <213> Homo sapiens

<400> 4708  
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 35 40 45  
 Tyr Phe Gly Ala Gln Ser Val Arg Val Leu Ser Asp Lys Gly Arg Leu  
 50 55 60  
 Lys His Thr Ala Phe Ala Thr Phe Pro Asn Glu Lys Ala Ala Ile Lys  
 65 70 75 80  
 Ala Leu Thr Arg Leu His Gln Leu Lys Leu Leu Gly His Thr Leu Val  
 85 90 95  
 Val Glu Phe Ala Lys Glu Gln Asp Arg Val His Ser Pro Cys Pro Thr



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 <212> DNA  
 <213> Homo sapiens

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<211> 304  
<212> PRT  
<213> Homo sapiens

<400> 4710  
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Gln Ser Arg Gly Phe Gly Phe Val Lys Phe Lys Asp Pro Asn Cys Val  
50 55 60  
Gly Thr Val Leu Ala Ser Arg Pro His Thr Leu Asp Gly Arg Asn Ile  
65 70 75 80  
Asp Pro Lys Pro Cys Thr Pro Arg Gly Met Gln Pro Glu Arg Thr Arg  
85 90 95  
Pro Lys Glu Gly Trp Gln Lys Gly Pro Arg Ser Asp Asn Ser Lys Ser  
100 105 110  
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115 120 125  
Leu Arg Glu Tyr Phe Lys Lys Phe Gly Val Val Thr Glu Val Val Met  
130 135 140  
Ile Tyr Asp Ala Glu Lys Gln Arg Pro Arg Gly Phe Gly Phe Ile Thr  
145 150 155 160  
Phe Glu Asp Glu Gln Ser Val Asp Gln Ala Val Asn Met His Phe His  
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180 185 190  
Ser Lys Ser Gln Ala Pro Gly Gln Pro Gly Ala Ser Gln Trp Gly Ser  
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225 230 235 240  
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245 250 255  
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<212> DNA  
<213> Homo sapiens

<400> 4711

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 <213> Homo sapiens

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 <213> Homo sapiens

<400> 4713

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&lt;210&gt; 4714

&lt;211&gt; 145

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4714

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&lt;210&gt; 4715

&lt;211&gt; 2051

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4715

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&lt;210&gt; 4716

&lt;211&gt; 239

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4716

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 145 150 155 160  
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 165 170 175  
 Glu Thr Leu Tyr Gln Gly Leu Leu Pro Ser Leu Pro Gln Tyr Met Ile  
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 195 200 205  
 Thr Asp Ser Ile Asn Ile Leu Ala Asp Val Leu Pro Glu Glu Met Pro  
 210 215 220  
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250

255

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 <212> PRT  
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 Glu Lys Asp Pro Asp Gly Cys Tyr Arg Leu Val Asp Tyr Leu Glu Gly  
 35 40 45  
 Ile Arg Lys Asn Phe Asp Glu Ala Ala Lys Val Leu Lys Phe Asn Cys  
 50 55 60  
 Glu Glu Asn Gln His Ser Asp Ser Cys Tyr Lys Leu Gly Ala Tyr Tyr  
 65 70 75 80  
 Val Thr Gly Lys Gly Gly Leu Thr Gln Asp Leu Lys Ala Ala Ala Arg  
 85 90 95  
 Cys Phe Leu Met Ala Cys Glu Lys Pro Gly Lys Lys Ser Ile Ala Ala  
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 Cys His Asn Val Gly Leu Leu Ala His Asp Gly Gln Val Asn Glu Asp  
 115 120 125  
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Ser Arg Met Tyr					
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<211> 285

<212> PRT

<213> Homo sapiens

<400> 4722

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Leu	Leu	His	Gly	Thr	Pro	Asp	Gln	Lys	Arg	Lys	Leu	Ile	Arg	Glu	Cys	35	40	45	
Leu	Thr	Gly	Glu	Ser	Glu	Ser	Ser	Ser	Glu	Asp	Glu	Phe	Glu	Lys	Glu	50	55	60	
Met	Glu	Ala	Glu	Leu	Asn	Ser	Thr	Met	Lys	Thr	Met	Glu	Asp	Lys	Leu	65	70	75	80
Ser	Ser	Leu	Gly	Thr	Gly	Ser	Ser	Ser	Gly	Asn	Gly	Lys	Val	Ala	Thr	85	90	95	
Ala	Pro	Thr	Arg	Tyr	Tyr	Asp	Asp	Ile	Tyr	Phe	Asp	Ser	Asp	Ser	Glu	100	105	110	
Asp	Glu	Asp	Arg	Ala	Val	Gln	Val	Thr	Lys	Lys	Lys	Lys	Lys	Lys	Gln	115	120	125	
His	Lys	Ile	Pro	Thr	Asn	Asp	Glu	Leu	Leu	Tyr	Asp	Pro	Glu	Lys	Asp	130	135	140	
Asn	Arg	Asp	Gln	Ala	Trp	Val	Asp	Ala	Gln	Arg	Arg	Gly	Tyr	His	Gly	145	150	155	160
Leu	Gly	Pro	Gln	Arg	Ser	Arg	Gln	Gln	Gln	Pro	Val	Pro	Asn	Ser	Asp	165	170	175	
Ala	Val	Leu	Asn	Cys	Pro	Ala	Cys	Met	Thr	Thr	Leu	Cys	Leu	Asp	Cys	180	185	190	
Gln	Arg	His	Glu	Ser	Tyr	Lys	Thr	Gln	Tyr	Arg	Ala	Met	Phe	Val	Met	195	200	205	
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Asp	Ala	Ala	Glu	Lys	Ala	Glu	Thr	Asp	Val	Glu	Glu	Ile	Tyr	His	Pro	245	250	255	
Val	Met	Cys	Thr	Glu	Cys	Ser	Thr	Glu	Val	Ala	Val	Tyr	Asp	Lys	Asp	260	265	270	
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<212> PRT  
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Gly Pro Pro Ser Pro Phe Pro Arg Gln Ser Pro Phe Gly Leu Asn Pro
           35           40           45
Phe Leu Pro Ala Gly Asp
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&lt;210&gt; 4725

&lt;211&gt; 366

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4725

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366

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&lt;210&gt; 4726

&lt;211&gt; 122

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4726

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Gly Arg Gly Ala Met Leu Ala Ile Asp Thr Ala Ser Asp Ile Leu Ala
           20           25           30
His Val His Val Tyr Ser Arg Leu Cys Ala Cys Ala Arg Val Tyr Met
           35           40           45
His Met Cys Thr Gly Ala Cys Ala Cys Val Asn Thr Cys Ser His Val
           50           55           60
Cys Thr Cys Xaa Ser Cys Pro Cys Xaa Tyr Val His Thr Cys Leu Cys
65           70           75           80
Met His Ala Cys Ile Ala Val Cys Pro Tyr Pro His Val Arg Ile His
           85           90           95
Met Arg Leu Cys Leu His Leu Cys Met His Ala Ser Val Leu Leu Arg
           100          105          110
Ala Trp Val Cys Ile Cys Ala Cys Thr Arg
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&lt;210&gt; 4727

&lt;211&gt; 2031

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4727

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&lt;210&gt; 4728

&lt;211&gt; 328

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4728

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			20					25					30		
Gln	Trp	Asp	Ser	Asp	Glu	Pro	Ile	Pro	Ala	Lys	Glu	Leu	Glu	Arg	Gly
		35					40					45			
Val	Ala	Gly	Ala	His	Gly	Leu	Leu	Cys	Leu	Leu	Ser	Asp	His	Val	Asp
	50					55					60				
Lys	Arg	Ile	Leu	Asp	Ala	Ala	Gly	Ala	Asn	Leu	Lys	Val	Ile	Ser	Thr
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Met	Ser	Val	Gly	Ile	Asp	His	Leu	Ala	Leu	Asp	Glu	Ile	Lys	Lys	Arg
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Gly	Ile	Arg	Val	Gly	Tyr	Thr	Pro	Asp	Val	Leu	Thr	Asp	Thr	Thr	Ala
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Glu	Leu	Ala	Val	Ser	Leu	Leu	Leu	Thr	Thr	Cys	Arg	Arg	Leu	Pro	Glu
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Ala	Ile	Glu	Glu	Val	Lys	Asn	Gly	Gly	Trp	Thr	Ser	Trp	Lys	Pro	Leu
	130					135					140				
Trp	Leu	Cys	Gly	Tyr	Gly	Leu	Thr	Gln	Ser	Thr	Val	Gly	Ile	Ile	Gly
145				150					155					160	
Leu	Gly	Arg	Ile	Gly	Gln	Ala	Ile	Ala	Arg	Arg	Leu	Lys	Pro	Phe	Gly
			165					170						175	
Val	Gln	Arg	Phe	Leu	Tyr	Thr	Gly	Arg	Gln	Pro	Arg	Pro	Glu	Glu	Ala
		180					185					190			
Ala	Glu	Phe	Gln	Ala	Glu	Phe	Val	Ser	Thr	Pro	Glu	Leu	Ala	Ala	Gln
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Ser	Asp	Phe	Ile	Val	Val	Ala	Cys	Ser	Leu	Thr	Pro	Ala	Thr	Glu	Gly

210		215		220
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Ile Asn Ile Ser Arg Gly	Asp Val Val Asn Gln	Asp Asp Leu Tyr Gln		
	245	250	255	
Ala Leu Ala Ser Gly Lys	Ile Ala Ala Ala Gly	Leu Asp Val Thr Ser		
	260	265	270	
Pro Glu Pro Leu Pro Thr	Asn His Pro Leu Leu	Thr Leu Lys Asn Cys		
	275	280	285	
Val Ile Leu Pro His Ile	Gly Ser Ala Thr His	Arg Thr Arg Asn Thr		
	290	295	300	
Met Ser Leu Leu Ala Ala	Asn Asn Leu Leu Ala	Gly Leu Arg Gly Glu		
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Pro Met Pro Ser Glu Leu	Lys Leu			
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 <213> Homo sapiens

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 <212> PRT  
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 35 40 45  
 Gln Asn Phe Leu Leu Glu Ser Asn Leu Gly Lys Lys Lys Tyr Glu Thr  
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 Glu Phe His Pro Gly Thr Thr Ser Phe Gly Met Ser Val Phe Asn Leu  
 65 70 75 80  
 Ser Asn Ala Ile Val Gly Ser Gly Ile Leu Gly Leu Ser Tyr Ala Met  
 85 90 95  
 Ala Asn Thr Gly Ile Ala Leu Phe Ile Ile Leu Leu Thr Phe Val Ser  
 100 105 110  
 Ile Phe Ser Leu Tyr Ser Val His Leu Leu Leu Lys Thr Ala Asn Glu  
 115 120 125  
 Gly Gly Ser Leu Leu Tyr Glu Gln Leu Gly Tyr Lys Ala Ser Gly Leu  
 130 135 140  
 Val Gly Lys Leu  
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&lt;210&gt; 4731

&lt;211&gt; 2417

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4731

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35 40 45  
Ser Val Thr Tyr Leu Gly Ile Pro Gln Gly Leu Leu Glu Cys Asp Cys  
50 55 60  
Pro Leu Pro Ser Cys Leu Gly Tyr Lys Ser Trp Pro Tyr Val Pro Ala  
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85 90 95  
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<211> 543  
<212> DNA  
<213> Homo sapiens

<400> 4733  
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gcaaaattga ggggccttgc agccccagt aacctttcta tgaatcagac tcttgaaggt  
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gatgaaaacg ggcttatcat tgtgtggatg ttatataaag gctcttggat tgaggagatg  
420  
atcaacaatc gaaataaatc agttgttcgc agtatgagct ggaatgctga cggacagaag  
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tgg  
543

<210> 4734  
 <211> 181  
 <212> PRT  
 <213> Homo sapiens

<400> 4734  
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 Phe Phe Tyr Leu Ser Lys Lys Ile Ser Ile Pro Asn Asn Val Lys Leu  
 35 40 45  
 Gln Cys Val Ser Trp Asn Lys Glu Gln Gly Phe Ile Ala Cys Gly Gly  
 50 55 60  
 Glu Asp Gly Leu Leu Lys Val Leu Lys Leu Glu Thr Gln Thr Asp Asp  
 65 70 75 80  
 Ala Lys Leu Arg Gly Leu Ala Ala Pro Ser Asn Leu Ser Met Asn Gln  
 85 90 95  
 Thr Leu Glu Gly His Ser Gly Ser Val Gln Val Val Thr Trp Asn Glu  
 100 105 110  
 Gln Tyr Gln Lys Leu Thr Thr Ser Asp Glu Asn Gly Leu Ile Ile Val  
 115 120 125  
 Trp Met Leu Tyr Lys Gly Ser Trp Ile Glu Glu Met Ile Asn Asn Arg  
 130 135 140  
 Asn Lys Ser Val Val Arg Ser Met Ser Trp Asn Ala Asp Gly Gln Lys  
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 Ile Cys Ile Val Tyr Glu Asp Gly Ala Val Ile Val Gly Ser Val Asp  
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 Gly Asn Arg Ile Trp  
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<210> 4735  
 <211> 300  
 <212> DNA  
 <213> Homo sapiens

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 cgtgtcccag gcaaaagcct cagctttgca gcagcagcag tactaccagt ggtaccagca  
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<210> 4736  
 <211> 93  
 <212> PRT  
 <213> Homo sapiens

&lt;400&gt; 4736

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             20             25             30
Lys Ser Gly Ala Ala Gly Gly Ser Ala Lys Ser Ser Ser Asn Gly Pro
             35             40             45
Val Ala Ser Ala Gln Tyr Val Ser Gln Ala Lys Ala Ser Ala Leu Gln
             50             55             60
Gln Gln Gln Tyr Tyr Gln Trp Tyr Gln Gln Asp Asn Tyr Ala Tyr Pro
65             70             75             80
Tyr Ser Tyr Tyr Tyr Pro Met Pro Pro Gly Pro Gly Met
             85             90

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&lt;210&gt; 4737

&lt;211&gt; 2602

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4737

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1020

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1260  
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2580  
aaaaaaaaa aaaaaaaaaa aa  
2602



<210> 4738  
 <211> 756  
 <212> PRT  
 <213> Homo sapiens

<400> 4738  
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 Thr Met Trp Glu Arg Asp Val Ser Ser Asp Arg Gln Glu Pro Gly Arg  
 35 40 45  
 Arg Gly Arg Ser Trp Gly Leu Glu Gly Ser Gln Ala Leu Ser Gln Gln  
 50 55 60  
 Ala Glu Val Ile Val Arg Gln Leu Gln Glu Leu Arg Arg Leu Glu Glu  
 65 70 75 80  
 Glu Val Arg Leu Leu Arg Glu Thr Ser Leu Gln Gln Lys Met Arg Leu  
 85 90 95  
 Glu Ala Gln Ala Met Glu Leu Glu Ala Leu Ala Arg Ala Glu Lys Ala  
 100 105 110  
 Gly Arg Ala Glu Ala Glu Gly Leu Arg Ala Ala Leu Ala Gly Ala Glu  
 115 120 125  
 Val Val Arg Lys Asn Leu Glu Glu Gly Arg Gln Arg Glu Leu Glu Glu  
 130 135 140  
 Val Gln Arg Leu His Gln Glu Gln Leu Ser Ser Leu Thr Gln Ala His  
 145 150 155 160  
 Glu Glu Ala Leu Ser Ser Leu Thr Ser Lys Ala Glu Gly Leu Glu Lys  
 165 170 175  
 Ser Leu Ser Ser Leu Glu Thr Arg Arg Ala Gly Glu Ala Lys Glu Leu  
 180 185 190  
 Ala Glu Ala Gln Arg Glu Ala Glu Leu Leu Arg Lys Gln Leu Ser Lys  
 195 200 205  
 Thr Gln Glu Asp Leu Glu Ala Gln Val Thr Leu Val Glu Asn Leu Arg  
 210 215 220  
 Lys Tyr Val Gly Glu Gln Val Pro Ser Glu Val His Ser Gln Thr Trp  
 225 230 235 240  
 Glu Leu Glu Arg Gln Lys Leu Leu Glu Thr Met Gln Leu Leu Gln Glu  
 245 250 255  
 Asp Arg Asp Ser Leu His Ala Thr Ala Glu Leu Leu Gln Val Arg Val  
 260 265 270  
 Gln Ser Leu Thr His Ile Leu Ala Leu Gln Glu Glu Glu Leu Thr Arg  
 275 280 285  
 Lys Val Gln Pro Ser Asp Ser Leu Glu Pro Glu Phe Thr Arg Lys Cys  
 290 295 300  
 Gln Ser Leu Leu Asn Arg Trp Arg Glu Lys Val Phe Ala Leu Met Val  
 305 310 315 320  
 Gln Leu Lys Ala Gln Glu Leu Glu His Ser Asp Ser Val Lys Gln Leu  
 325 330 335  
 Lys Gly Gln Val Ala Ser Leu Gln Glu Lys Val Thr Ser Gln Ser Gln  
 340 345 350  
 Glu Gln Ala Ile Leu Gln Arg Ser Leu Gln Asp Lys Ala Ala Glu Val  
 355 360 365  
 Glu Val Glu Arg Met Gly Ala Lys Gly Leu Gln Leu Glu Leu Ser Arg

370 375 380  
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 385 390 395 400  
 Glu Gln Leu Arg Leu Val Val Asn Ala Val Ser Ser Ser Gln Ile Trp  
 405 410 415  
 Leu Glu Thr Thr Met Ala Lys Val Glu Gly Ala Ala Ala Gln Leu Pro  
 420 425 430  
 Ser Leu Asn Asn Arg Leu Ser Tyr Ala Val Arg Lys Val His Thr Ile  
 435 440 445  
 Arg Gly Leu Ile Ala Arg Lys Leu Ala Leu Ala Gln Leu Arg Gln Glu  
 450 455 460  
 Ser Cys Pro Leu Pro Pro Pro Val Thr Asp Val Ser Leu Glu Leu Gln  
 465 470 475 480  
 Gln Leu Arg Glu Glu Arg Asn Arg Leu Asp Ala Glu Leu Gln Leu Ser  
 485 490 495  
 Ala Arg Leu Ile Gln Gln Glu Val Gly Arg Ala Arg Glu Gln Gly Glu  
 500 505 510  
 Ala Glu Arg Gln Gln Leu Ser Lys Val Ala Gln Gln Leu Glu Gln Glu  
 515 520 525  
 Leu Gln Gln Thr Gln Glu Ser Leu Ala Ser Leu Gly Leu Gln Leu Glu  
 530 535 540  
 Val Ala Arg Gln Gly Gln Gln Glu Ser Thr Glu Glu Ala Ala Ser Leu  
 545 550 555 560  
 Arg Gln Glu Leu Thr Gln Gln Gln Glu Leu Tyr Gly Gln Ala Leu Gln  
 565 570 575  
 Glu Lys Val Ala Glu Val Glu Thr Arg Leu Arg Glu Gln Leu Ser Asp  
 580 585 590  
 Thr Glu Arg Arg Leu Asn Glu Ala Arg Arg Glu His Ala Lys Ala Val  
 595 600 605  
 Val Ser Leu Arg Gln Ile Gln Arg Arg Ala Ala Gln Glu Lys Glu Arg  
 610 615 620  
 Ser Gln Glu Leu Arg Arg Leu Gln Glu Glu Ala Arg Lys Glu Glu Gly  
 625 630 635 640  
 Gln Arg Leu Ala Arg Arg Leu Gln Glu Leu Glu Arg Asp Lys Asn Leu  
 645 650 655  
 Met Leu Ala Thr Leu Gln Gln Glu Gly Leu Leu Ser Arg Tyr Lys Gln  
 660 665 670  
 Gln Arg Leu Leu Thr Val Leu Pro Ser Leu Leu Asp Lys Lys Lys Ser  
 675 680 685  
 Val Val Ser Ser Pro Arg Pro Pro Glu Cys Ser Ala Ser Ala Pro Val  
 690 695 700  
 Ala Ala Ala Val Pro Thr Arg Glu Ser Ile Lys Gly Ser Leu Ser Val  
 705 710 715 720  
 Leu Leu Asp Asp Leu Gln Asp Leu Ser Glu Ala Ile Ser Lys Glu Glu  
 725 730 735  
 Ala Val Cys Gln Gly Asp Asn Leu Asp Arg Cys Ser Ser Ser Asn Pro  
 740 745 750  
 Gln Met Ser Ser  
 755

&lt;210&gt; 4739

&lt;211&gt; 684

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4739

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120  
tagccctctc tcttgctcct ttaaactctg aacttctagg atgggagaat gggaactttt  
180  
gcagggttgag attcatagtg aaatcgggtc aagaagtgat cagatgcaaa gcacagggca  
240  
gttcattact ataccatggc tgaggtcttc ctgggcacca ggccctgggc tcagcacttg  
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660  
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684

&lt;210&gt; 4740

&lt;211&gt; 119

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4740

Met	Leu	Leu	Ser	Arg	Ala	Gln	His	Ala	Leu	Trp	Pro	Pro	Trp	Ala	His
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Pro	Ala	Val	Thr	Gln	Leu	Ser	His	Leu	Arg	Gly	Ser	Leu	Asp	Ala	Ala
			20					25					30		
Trp	Leu	Ser	Asp	Lys	Asp	Lys	Glu	Lys	Ile	Gln	Met	Ser	Thr	Arg	Ala
		35					40					45			
Val	His	Ile	Leu	Trp	Val	Ser	Trp	Glu	Gln	Gly	Trp	Ala	Val	Pro	Glu
	50					55					60				
Ala	Pro	Ser	Gln	Pro	Ala	Pro	Gln	Ala	Ala	Asn	Gly	Ser	Leu	Leu	Leu
65				70					75					80	
Gly	Gln	Gly	Ile	Cys	Gly	Gln	Glu	Ser	Thr	Leu	Val	Arg	Arg	Arg	Leu
			85					90					95		
Ala	Ser	Asn	Thr	Gln	Pro	Cys	Leu	Arg	Ala	Pro	Ala	Val	Glu	Gly	Ser
			100					105					110		
Gly	Arg	Val	Gln	Gly	Ala	Asp									

&lt;210&gt; 4741

&lt;211&gt; 411

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

<400> 4741  
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 120  
 ttccgaaaaa aagaggggaa ttttttaaaa aaccgaaaag gggggaagg ggggggtata  
 180  
 aaagataaaa tttggttttt tgggggggaa aatttgga ca cccaccctc gggttttttt  
 240  
 tccccacccc aaaaaatttt aaaagggggc cctaaaaaaa attttttctt taatttccaa  
 300  
 ataaaaaaaa aatgggggttc caaaatcatt gaaaaatagg ggggactcca aaaccttgaa  
 360  
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 411

<210> 4742  
 <211> 109  
 <212> PRT  
 <213> Homo sapiens

<400> 4742  
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 Phe Phe Leu Gly Pro Pro Phe Lys Ile Phe Trp Gly Gly Glu Lys Lys  
 20 25 30  
 Pro Glu Gly Gly Val Ser Lys Phe Ser Pro Pro Lys Asn Gln Ile Leu  
 35 40 45  
 Ser Phe Ile Pro Pro Pro Phe Pro Pro Phe Gly Phe Phe Lys Lys Phe  
 50 55 60  
 Pro Ser Phe Phe Arg Lys Gly Lys Gly Gly Glu Arg Gly Gly Gln Arg  
 65 70 75 80  
 Lys Thr Pro Phe Phe Phe Leu Arg Lys Lys Arg Glu Lys Lys Lys Lys  
 85 90 95  
 Lys Glu Arg Lys Thr Pro Val Asp Leu Arg Glu Val Asn  
 100 105

<210> 4743  
 <211> 473  
 <212> DNA  
 <213> Homo sapiens

<400> 4743  
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 120  
 gagtgattga gtcccgggtat ctgcagtatg aaaagaagac aaccctaaaag gtcctgcag  
 180  
 gagatgggtc acagacccga gggaagatgt ctgaagggtg aaggaaatcc agcctgctcc  
 240  
 agaaaagcaa agcagatagc agtgggggtcg gaaagggtga cctgcagtcc acgttgctgg  
 300

aagggcatgg cacagctcca cctgacctgg atctctctgc tattaatgac aaaagcatcg  
 360  
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 420  
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 473

<210> 4744  
 <211> 150  
 <212> PRT  
 <213> Homo sapiens

<400> 4744  
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 20 25 30  
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 35 40 45  
 Lys Ala Pro Ala Gly Asp Gly Ser Gln Thr Arg Gly Lys Met Ser Glu  
 50 55 60  
 Gly Gly Arg Lys Ser Ser Leu Leu Gln Lys Ser Lys Ala Asp Ser Ser  
 65 70 75 80  
 Gly Val Gly Lys Gly Asp Leu Gln Ser Thr Leu Leu Glu Gly His Gly  
 85 90 95  
 Thr Ala Pro Pro Asp Leu Asp Leu Ser Ala Ile Asn Asp Lys Ser Ile  
 100 105 110  
 Val Lys Lys Thr Pro Gln Leu Ala Lys Thr Ile Ser Lys Lys Pro Glu  
 115 120 125  
 Ser Thr Ser Phe Ser Ala Pro Arg Lys Lys Ser Pro Asp Leu Ser Glu  
 130 135 140  
 Ala Asn Gly Met Met Glu  
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<210> 4745  
 <211> 666  
 <212> DNA  
 <213> Homo sapiens

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 180  
 caaagaggta ctacagaaat aggtatgata ggatcaaagc ctttctcaac agttaagtac  
 240  
 aaaaatgagg gtccagatta tagactctac aagagtgaac cagagttaac aacagtggca  
 300  
 gaagttgatg aatctaattgg agaagaaaaa tcagaacctg tttcagagat agaaacttca  
 360  
 gttgttaaag gttcccactt tctgttgga gtagtccttc caagagcaaa atcaccaaca  
 420

cccgaatctt cgacaatagc ttcctatgta accttgagga aaactaagaa gatgatggat  
 480  
 ctaagaacgg aaagaccaag aagtgcagtg gaacagctct gtttggctga aagtactcga  
 540  
 ccaaggatga ctgtggaaga gcaaattggaa agaataagaa gatatacaaca agcgtgcctg  
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 agggagaaga aaaaagggtt aaatggtatc ggtgcttcag accagtcacc cttacaaagc  
 660  
 ccttaa  
 666

<210> 4746  
 <211> 221  
 <212> PRT  
 <213> Homo sapiens

<400> 4746  
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 Asn Gln Met Gln Glu Gln Leu Asp His Leu Gly Glu Val Gln Thr Glu  
 20 25 30  
 Ser Ala Gly Ile Gln Arg Ala Gln Ile Gln Lys Glu Leu Trp Arg Ile  
 35 40 45  
 Gln Asp Val Met Glu Gly Leu Ser Lys His Lys Gln Gln Arg Gly Thr  
 50 55 60  
 Thr Glu Ile Gly Met Ile Gly Ser Lys Pro Phe Ser Thr Val Lys Tyr  
 65 70 75 80  
 Lys Asn Glu Gly Pro Asp Tyr Arg Leu Tyr Lys Ser Glu Pro Glu Leu  
 85 90 95  
 Thr Thr Val Ala Glu Val Asp Glu Ser Asn Gly Glu Glu Lys Ser Glu  
 100 105 110  
 Pro Val Ser Glu Ile Glu Thr Ser Val Val Lys Gly Ser His Phe Pro  
 115 120 125  
 Val Gly Val Val Pro Pro Arg Ala Lys Ser Pro Thr Pro Glu Ser Ser  
 130 135 140  
 Thr Ile Ala Ser Tyr Val Thr Leu Arg Lys Thr Lys Lys Met Met Asp  
 145 150 155 160  
 Leu Arg Thr Glu Arg Pro Arg Ser Ala Val Glu Gln Leu Cys Leu Ala  
 165 170 175  
 Glu Ser Thr Arg Pro Arg Met Thr Val Glu Glu Gln Met Glu Arg Ile  
 180 185 190  
 Arg Arg Tyr Gln Gln Ala Cys Leu Arg Glu Lys Lys Lys Gly Leu Asn  
 195 200 205  
 Val Ile Gly Ala Ser Asp Gln Ser Pro Leu Gln Ser Pro  
 210 215 220

<210> 4747  
 <211> 1091  
 <212> DNA  
 <213> Homo sapiens

<400> 4747  
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acgcatactg acgccaaaat ccgtgctgaa aatggaacag ggtccagccc tcggggtcct  
 120  
 ggctgcagcc tccggcactt tgctgcgaa cagaacctgc tgcgcggcc agatggctct  
 180  
 gcttccttcc tgcaaggtga cacctctgtc ctggcgggtg tgtacgggcc ggccgaggtg  
 240  
 aaggtcagca aagagatttt caacaaggcc acactcgaag tgatcctgag gccgaagatt  
 300  
 gggctgcctg caggggtcag tggatggcag tcaggccttg ccttcttccc actggaatct  
 360  
 tccatcatcc ctgcaggtgt tgcagagaag agccgggagc ggctgatcag gaacacgtgc  
 420  
 gaggcggtgg tgctgggcac gttgcacccc cgcacctcca tcaccgtggt gctgcaggtt  
 480  
 gtcagcgatg ccggctctct cctggcctgt tgtctgaatg ccgcctgcat ggcattggtg  
 540  
 gatgcaggtg tgcccatgcg ggctctcttc tgtggggtcg cctgcgcctt ggactctgat  
 600  
 gggaccctcg tgctggatcc tacatccaag caagaaaagg aggcccgggc agtcctgacc  
 660  
 tttgccctgg acagcgtgga acggaagctg ctgatgtcca gcaccaaggg gctctactca  
 720  
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 780  
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&lt;210&gt; 4748

&lt;211&gt; 273

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4748

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Thr	Gly	Ser	Ser	Pro	Arg	Gly	Pro	Gly	Cys	Ser	Leu	Arg	His	Phe	Ala
			35					40					45		
Cys	Glu	Gln	Asn	Leu	Leu	Ser	Arg	Pro	Asp	Gly	Ser	Ala	Ser	Phe	Leu
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Gln	Gly	Asp	Thr	Ser	Val	Leu	Ala	Gly	Val	Tyr	Gly	Pro	Ala	Glu	Val
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<212> DNA
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 <213> Homo sapiens

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 35 40 45  
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 50 55 60  
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 65 70 75 80  
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 85 90 95  
 Thr Gln Thr Ser Ile Thr Asp Ser Cys Ala Val Tyr Arg Val Asn Asn  
 100 105 110  
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 115 120 125  
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 Val Phe Val Val Asp Ser Ala Ala Phe Gln Arg Glu Val Lys Asp Val  
 145 150 155 160  
 Ala Glu Phe Leu Tyr Gln Val Leu Ile Asp Ser Met Gly Leu Lys Asn  
 165 170 175  
 Thr Pro Ser Phe Leu Ile Ala Cys Asn Lys Gln Asp Ile Ala Met Ala  
 180 185 190  
 Lys Ser Ala Lys Leu Ile Gln Gln Gln Leu Glu Lys Glu Leu Asn Thr  
 195 200 205  
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 210 215 220  
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 225 230 235 240  
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&lt;210&gt; 4752

&lt;211&gt; 335

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4752

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			20					25					30		
Leu	Leu	Asp	Ser	Leu	His	Val	Gln	Thr	Phe	Phe	His	Arg	Phe	Asp	Pro
		35					40					45			
Ser	Leu	Trp	Pro	Arg	Ile	Thr	Phe	Leu	Leu	Pro	Pro	Ala	Pro	Pro	Pro
	50					55					60				
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65					70				75					80	
Phe	Thr	Pro	Thr	Thr	Leu	Pro	Thr	Ser	Gln	Asn	Ser	Ile	His	Pro	Val
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&lt;210&gt; 4762

&lt;211&gt; 251

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4762

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 <212> PRT  
 <213> Homo sapiens

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 Lys Gly Pro Leu Cys Lys Ser Val Thr Pro Thr Lys Glu Phe Leu Lys  
 50 55 60  
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 65 70 75 80  
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 85 90 95  
 Asp Glu Arg Val Ala Pro Asn Phe Lys Thr Glu Pro Ile Glu Thr Lys  
 100 105 110  
 Phe Tyr Glu Thr Lys Glu Glu Ser Tyr Ser Pro Ser Lys Asp Arg Asn  
 115 120 125  
 Ile Ile Thr Glu Gly Asn Gly Thr Glu Ser Leu Asn Ser Val Ile Thr  
 130 135 140  
 Ser Met Lys Thr Gly Glu Leu Glu Lys Glu Thr Ala Pro Leu Arg Lys  
 145 150 155 160  
 Asp Ala Asp Ser Ser Ile Ser Val Leu Glu Ile His Ser Gln Lys Ala  
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 Gln Ile Glu Glu Pro Asp Pro Pro Glu Met Glu Thr Ser Leu Asp Ser

3943

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Leu Leu Glu Arg Arg Ser Thr Arg Thr Arg Lys Cys Ile Ser Tyr Arg				
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Phe Asp Glu Phe Asp Glu Ala Ile Asp Glu Ala Ile Glu Asp Asp Ile				
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Ile Thr Gly His Arg Gly Lys Asp Ile Ser Thr Ile Leu Asp Glu				
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 <213> Homo sapiens

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&lt;210&gt; 4766

&lt;211&gt; 280

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4766

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Asp	Thr	Thr	Met	Ser	Leu	His	Ser	Gln	Ala	Ser	Ala	Thr	Thr	Arg	His
			20					25						30	
Pro	Glu	Pro	Arg	Arg	Thr	Glu	His	Arg	Ala	Pro	Ser	Ser	Thr	Trp	Arg
			35				40					45			
Pro	Val	Ala	Leu	Thr	Leu	Leu	Thr	Leu	Cys	Leu	Val	Leu	Leu	Ile	Gly
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Leu	Ala	Ala	Leu	Gly	Leu	Leu	Phe	Phe	Gln	Tyr	Tyr	Gln	Leu	Ser	Asn
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Thr	Gly	Gln	Asp	Thr	Ile	Ser	Gln	Met	Glu	Glu	Arg	Leu	Gly	Asn	Thr
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Ser	Gln	Glu	Leu	Gln	Ser	Leu	Gln	Val	Gln	Asn	Ile	Lys	Leu	Ala	Gly
			100					105					110		
Ser	Leu	Gln	His	Val	Ala	Glu	Lys	Leu	Cys	Arg	Glu	Leu	Tyr	Asn	Lys
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Cys	Lys	Tyr	Phe	Cys	Leu	Ser	Glu	Asn	Ser	Thr	Met	Leu	Lys	Ile	Asn
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Lys	Gln	Glu	Asp	Leu	Glu	Phe	Ala	Ala	Ser	Gln	Ser	Tyr	Ser	Glu	Phe

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Cys	Glu	Arg	Arg	Ala	Gly	Met	Val	Lys	Pro	Glu	Ser	Leu	His	Val	Pro		
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&lt;210&gt; 4767

&lt;211&gt; 1380

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4767

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1020

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<210> 4768

<211> 460

<212> PRT

<213> Homo sapiens

<400> 4768

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Asp	Phe	Ser	Glu	Ala	Asp	Leu	Val	Asp	Val	Ser	Ala	Tyr	Ser	Gly	Leu	35	40	45	
Gly	Glu	Asp	Ser	Ala	Gly	Ser	Ala	Leu	Glu	Glu	Asp	Asp	Glu	Asp	Asp	50	55	60	
Glu	Gly	Asp	Gly	Glu	Pro	Pro	Tyr	Glu	Pro	Glu	Ser	Gly	Cys	Val	Glu	65	70	75	80
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His	Phe	Ser	Thr	Ala	Pro	Ile	Gln	Val	Phe	Ser	Thr	Tyr	Ser	Asn	Glu	100	105	110	
Asp	Tyr	Asp	Arg	Arg	Asn	Glu	Asp	Val	Asp	Pro	Met	Ala	Ala	Ser	Ala	115	120	125	
Glu	Tyr	Glu	Leu	Glu	Lys	Arg	Val	Glu	Arg	Leu	Glu	Leu	Phe	Pro	Val	130	135	140	
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Gly	Ala	Gly	Ala	Asp	Met	Gly	Leu	Glu	Lys	Leu	Gly	Ile	Phe	Val	Lys	165	170	175	
Thr	Val	Thr	Glu	Gly	Gly	Ala	Ala	His	Arg	Asp	Gly	Arg	Ile	Gln	Val	180	185	190	
Asn	Asp	Leu	Leu	Val	Glu	Val	Asp	Gly	Thr	Ser	Leu	Val	Gly	Val	Thr	195	200	205	
Gln	Ser	Phe	Ala	Ala	Ser	Val	Leu	Arg	Asn	Thr	Lys	Gly	Arg	Val	Arg	210	215	220	
Phe	Met	Ile	Gly	Arg	Glu	Arg	Pro	Gly	Glu	Gln	Ser	Glu	Val	Ala	Gln	225	230	235	240
Leu	Ile	Gln	Gln	Thr	Leu	Glu	Gln	Glu	Arg	Trp	Gln	Arg	Glu	Met	Met	245	250	255	
Glu	Gln	Arg	Tyr	Ala	Gln	Tyr	Gly	Glu	Asp	Asp	Glu	Glu	Thr	Gly	Glu	260	265	270	
Tyr	Ala	Thr	Asp	Glu	Asp	Glu	Glu	Leu	Ser	Pro	Thr	Phe	Pro	Gly	Gly				



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Leu Gln Ile Lys His Ala Val Thr Glu Ala Glu Ile Gln Gln Leu Lys
      325      330      335
Arg Lys Leu Gln Ser Leu Glu Gln Glu Lys Gly Arg Trp Arg Val Glu
      340      345      350
Lys Ala Gln Leu Glu Gln Ser Val Glu Glu Asn Lys Glu Arg Met Glu
      355      360      365
Lys Leu Glu Gly Tyr Trp Gly Glu Ala Gln Ser Leu Cys Gln Ala Val
      370      375      380
Asp Glu His Leu Arg Glu Thr Gln Ala Gln Tyr Gln Ala Leu Glu Arg
385      390      395      400
Lys Tyr Ser Lys Ala Lys Arg Leu Ile Lys Asp Tyr Gln Gln Lys Glu
      405      410      415
Ile Glu Phe Leu Lys Lys Glu Thr Ala Gln Arg Arg Val Leu Glu Glu
      420      425      430
Ser Glu Leu Ala Arg Lys Glu Glu Met Asp Lys Leu Leu Asp Lys Ile
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Ser Glu Leu Glu Gly Asn Leu Gln Thr Leu Arg Asn
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&lt;210&gt; 4769

&lt;211&gt; 1533

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4769

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 <211> 237  
 <212> PRT  
 <213> Homo sapiens

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 Pro Glu Val Gly Asp Leu Leu Arg Asn Lys Leu Val Arg Leu Met Thr  
 65 70 75 80  
 His Leu Asp Thr Asp Val Lys Arg Val Ala Ala Glu Phe Leu Phe Val  
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 Leu Cys Ser Glu Ser Val Pro Arg Phe Ile Lys Tyr Thr Gly Tyr Gly  
 100 105 110  
 Asn Ala Ala Gly Leu Leu Ala Ala Arg Gly Leu Met Ala Gly Gly Arg  
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&lt;210&gt; 4771

&lt;211&gt; 2653

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4771

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<400> 4774

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           35           40           45
Met Gly Trp Arg Val Leu Ala Trp Thr Gln His Pro Ile Ser Ser Ala
           50           55           60
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<213> Homo sapiens

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&lt;210&gt; 4778

&lt;211&gt; 144

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4778

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WO 00/58473

PCT/US00/08621

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<212> PRT

<213> Homo sapiens

<400> 4780

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Gln Gln Gln Gln Gln Gln Gln Gln Gln Pro Gln Gln Pro Gln Val Leu  
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65 70 75 80  
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Pro Gly Glu Ala Ala Val Arg Arg Ser Val Glu His Leu Gln Lys His  
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Gln Ala Gln Leu Pro Pro Lys Pro Pro Ala Trp Ala Trp Ala Glu Gly  
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Trp Thr Arg Tyr Gly Pro Glu Gly Glu Ala Val Pro Val Ala Ile Pro  
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Glu Glu Arg Ala Leu Val Phe Asp Val Glu Val Cys Leu Ala Glu Gly  
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Trp Cys Ser Gln Arg Leu Val Glu Glu Arg Tyr Ser Trp Thr Ser Gln  
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Leu Ser Pro Ala Asp Leu Ile Pro Leu Glu Val Pro Thr Gly Ala Ser  
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Ser Pro Thr Gln Arg Asp Trp Gln Glu Gln Leu Val Val Gly His Asn  
260 265 270  
Val Ser Phe Asp Arg Ala His Ile Arg Glu Gln Tyr Leu Ile Gln Gly  
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Ser Arg Met Arg Phe Leu Asp Thr Met Ser Met His Met Ala Ile Ser  
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Gly Leu Ser Ser Phe Gln Arg Ser Leu Trp Ile Ala Ala Lys Gln Gly  
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Lys His Lys Val Gln Pro Pro Thr Lys Gln Gly Gln Lys Ser Gln Arg  
325 330 335  
Lys Ala Arg Arg Gly Pro Ala Ile Ser Ser Trp Asp Trp Leu Asp Ile  
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355 360 365  
Pro Pro Leu Glu Lys Glu Pro Arg Glu Leu Phe Val Lys Gly Thr Met  
370 375 380  
Lys Asp Ile Arg Glu Asn Phe Gln Asp Leu Met Gln Tyr Cys Ala Gln

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420 425 430  
Gly Val Ser Tyr Leu Pro Val Asn Gln Asn Trp Glu Arg Tyr Leu Ala  
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Glu Ala Gln Gly Thr Tyr Glu Glu Leu Gln Arg Glu Met Lys Lys Ser  
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Tyr Lys Glu Asp Pro Trp Leu Trp Asp Leu Glu Trp Asp Leu Gln Glu  
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Phe Lys Gln Lys Lys Ala Lys Lys Val Lys Lys Glu Pro Ala Thr Ala  
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Ser Lys Leu Pro Ile Glu Gly Ala Gly Ala Pro Gly Asp Pro Met Asp  
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Gln Glu Asp Leu Gly Pro Cys Ser Glu Glu Glu Glu Phe Gln Gln Asp  
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Leu Pro Lys Arg Pro Gln His Leu Pro Gly His Pro Gly Trp Tyr Arg  
565 570 575  
Lys Leu Cys Pro Arg Leu Asp Asp Pro Ala Trp Thr Pro Gly Pro Ser  
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Trp Asp Gly Phe Pro Leu His Tyr Ser Glu Arg His Gly Trp Gly Tyr  
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Gly Asn Gly Pro Tyr Asn Asp Val Asp Ile Pro Gly Cys Trp Phe Phe  
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770 775 780  
Pro Gly Gly Ala Ser Gly Pro Arg Ala Leu Glu Ile Asn Lys Met Ile  
785 790 795 800  
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Trp Leu Pro Arg Ser Ala Leu Pro Arg Ala Val Ile Arg His Pro Asp

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Tyr	Asp	Glu	Gly	Leu	Tyr
	835		840		845
Ala	Gly	Thr	Ile	Thr	Arg
	850		855		860
Ser	Asn	Ala	Arg	Pro	Asp
	865		870		875
Gln	Ala	Pro	Pro	Gly	Tyr
			885		890
Glu	Leu	Trp	Ile	Ala	Ala
			900		905
His	Gly	Cys	Thr	Ala	Phe
			915		920
Arg	Gly	Thr	Asp	Leu	His
			930		935
Arg	Glu	His	Ala	Lys	Ile
			945		950
Gln	Pro	Phe	Ala	Glu	Arg
			965		970
Gln	Gln	Glu	Ala	Glu	Lys
			980		985
Gly	Leu	Arg	Trp	Tyr	Arg
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Glu	Leu	Asn	Leu	Pro	Val
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Gln	Asp	Leu	Arg	Lys	Val
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Lys	Lys	Trp	Glu	Val	Val
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Ser	Glu	Met	Phe	Asn	Lys
			1060		1065
Arg	Thr	Pro	Val	Leu	Gly
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Ala	Val	Gln	Glu	Glu	Phe
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Ser	Ser	Ala	Val	Asp	Tyr
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Leu	Phe	Glu	Glu	Phe	Ala
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Asp	Glu	Val	Arg	Tyr	Leu
			1140		1145
Leu	Ala	Leu	Gln	Ile	Thr
			1155		1160
Lys	Leu	Gly	Leu	Asn	Asp
			1170		1175
Val	Asp	Ile	Tyr	Arg	Cys
			1185		1190
Thr	Pro	Ser	Asn	Pro	Thr
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Gly	Glu	Ala	Leu	Asp	Ile
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 <211> 344  
 <212> DNA  
 <213> Homo sapiens

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 gggggccaga ccaggaagct gacggcctcc aggacggtgt cagagaagca ccagggcaaa  
 180  
 gcggcaacca cagccaagac gctcattccc aaaagtcagc acagaatgct ggctcccaca  
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 ggagcagttt caacaaggac gagacagaaa ggagtgacca cagcagtcac cccacctaag  
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 <212> PRT  
 <213> Homo sapiens

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 35 40 45  
 Ser Glu Lys His Gln Gly Lys Ala Ala Thr Thr Ala Lys Thr Leu Ile  
 50 55 60  
 Pro Lys Ser Gln His Arg Met Leu Ala Pro Thr Gly Ala Val Ser Thr  
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 Arg Thr Arg Gln Lys Gly Val Thr Thr Ala Val Ile Pro Pro Lys Glu  
 85 90 95  
 Lys Lys Pro Gln Ala Thr Pro Pro Pro Ala Pro Phe Gln  
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<210> 4783  
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 <212> DNA  
 <213> Homo sapiens

<400> 4783  
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 180  
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&lt;210&gt; 4784

&lt;211&gt; 212

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4784

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		20						25					30		
Ala	Leu	Asn	Leu	Ser	Leu	Cys	Lys	Gln	Ile	Thr	Asp	Ser	Ser	Leu	Gly
		35					40					45			
Arg	Ile	Ala	Gln	Tyr	Leu	Lys	Gly	Leu	Glu	Val	Leu	Glu	Leu	Gly	Gly
	50					55					60				
Cys	Ser	Asn	Ile	Thr	Asn	Thr	Gly	Leu	Leu	Leu	Ile	Ala	Trp	Gly	Leu
	65				70				75					80	
Gln	Arg	Leu	Lys	Ser	Leu	Asn	Leu	Arg	Ser	Cys	Arg	His	Leu	Ser	Asp
			85					90					95		
Val	Gly	Ile	Gly	His	Leu	Ala	Gly	Met	Thr	Arg	Ser	Ala	Ala	Glu	Gly
		100					105					110			
Cys	Leu	Gly	Leu	Glu	Gln	Leu	Thr	Leu	Gln	Asp	Cys	Gln	Lys	Leu	Thr



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Asp Leu Ser Leu Lys His Ile Ser Arg Gly Leu Thr Gly Leu Arg Leu
      130      135      140
Leu Asn Leu Ser Phe Cys Gly Gly Ile Ser Asp Ala Gly Leu Leu His
145      150      155      160
Leu Ser His Met Gly Ser Leu Arg Ser Leu Asn Leu Arg Ser Cys Asp
      165      170      175
Asn Ile Ser Asp Thr Gly Ile Met His Leu Ala Met Gly Ser Leu Arg
      180      185      190
Leu Ser Gly Leu Asp Val Ser Phe Cys Asp Lys Val Gly Asp Gln Ser
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Leu Ala Tyr Ile
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<210> 4785
<211> 3289
<212> DNA
<213> Homo sapiens

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acataaacta gtgatttaca ttgatttaca catgattggt gcctaattta ttaatcagca
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240
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&lt;210&gt; 4786

&lt;211&gt; 322

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4786

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		20						25					30		
Val	Gly	Ala	Asp	Asn	Val	Gly	Ser	Lys	Gln	Met	Gln	Gln	Ile	Arg	Met
		35					40					45			
Ser	Leu	Arg	Gly	Lys	Ala	Val	Val	Leu	Met	Gly	Lys	Asn	Thr	Met	Met
		50				55					60				
Arg	Lys	Ala	Ile	Arg	Gly	His	Leu	Glu	Asn	Asn	Pro	Ala	Leu	Glu	Lys
65					70				75					80	
Leu	Leu	Pro	His	Ile	Arg	Gly	Asn	Val	Gly	Phe	Val	Phe	Thr	Lys	Glu
			85					90					95		
Asp	Leu	Thr	Glu	Ile	Arg	Asp	Met	Leu	Leu	Ala	Asn	Lys	Val	Pro	Ala
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Ala	Ala	Arg	Ala	Gly	Ala	Ile	Ala	Pro	Cys	Glu	Val	Thr	Val	Pro	Ala
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Val	Gln	Leu	Ile	Lys	Thr	Gly	Asp	Lys	Val	Gly	Ala	Ser	Glu	Ala	Thr
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Leu	Leu	Asn	Met	Leu	Asn	Ile	Ser	Pro	Phe	Ser	Phe	Gly	Leu	Val	Ile
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900
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1258

&lt;210&gt; 4788

&lt;211&gt; 197

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4788

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Val	Glu	Thr	Met	Glu	Gly	Pro	Pro	Arg	Arg	Thr	Cys	Arg	Ser	Pro	Glu	
			20					25					30			
Pro	Gly	Pro	Ser	Ser	Ser	Ile	Gly	Ser	Pro	Gln	Ala	Ser	Ser	Pro	Pro	
			35				40					45				
Arg	Pro	Asn	His	Tyr	Leu	Leu	Ile	Asp	Thr	Gln	Gly	Val	Pro	Tyr	Thr	
	50					55				60						
Val	Leu	Val	Asp	Glu	Glu	Ser	Gln	Arg	Glu	Pro	Gly	Ala	Ser	Gly	Ala	
65				70					75					80		
Pro	Gly	Gln	Lys	Lys	Cys	Tyr	Ser	Cys	Pro	Val	Cys	Ser	Arg	Val	Phe	
			85					90					95			
Glu	Tyr	Met	Ser	Tyr	Leu	Gln	Arg	His	Ser	Ile	Thr	His	Ser	Glu	Val	
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&lt;211&gt; 1515

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4789

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&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4790

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&lt;211&gt; 4481

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

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&lt;211&gt; 541

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4796

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&lt;211&gt; 2848

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4797

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 Thr Asn Ile Asn Phe Leu Leu Glu Glu Tyr Gly Ile Met Val Asn Asn  
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 Asp Ala Val Val Arg Asn Val Tyr His Lys Tyr Phe His Pro Lys Glu  
 115 120 125  
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 130 135 140  
 Gly Lys Ala Val Leu Ala Ile Ile Asp Glu Glu Ser Ser Gly Asn Asn  
 145 150 155 160  
 Ala Gln Ala Leu Thr Phe Val Tyr Pro Phe Gly Ala Thr Leu Ser Val  
 165 170 175  
 Met Lys Pro Ala Val Ala Val Leu Ser Thr Gly Ser Val Cys Phe Pro  
 180 185 190  
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 195 200 205  
 Lys Leu Ala Val Leu Gly Ser Cys His Met Phe Ser Asp Gln Tyr Leu  
 210 215 220  
 Asp Lys Glu Glu Asn Ser Lys Ile Met Asp Val Val Val Phe Gln Trp  
 225 230 235 240  
 Leu Thr Thr Gly Asp Ile His Leu Asn Gln Ile Asp Ala Glu Asp Pro  
 245 250 255  
 Glu Ile Ser Asp Tyr Met Met Leu Pro Tyr Thr Ala Thr Leu Ser Lys  
 260 265 270  
 Arg Asn Arg Glu Cys Leu Gln Glu Ser Asp Glu Ile Pro Arg Asp Phe  
 275 280 285  
 Thr Thr Leu Phe Asp Leu Ser Ile Phe Gln Leu Asp Thr Thr Ser Phe  
 290 295 300  
 His Ser Val Ile Glu Ala His Glu Gln Leu Asn Val Lys His Glu Pro  
 305 310 315 320  
 Leu Gln Leu Ile Gln Pro Gln Phe Glu Thr Pro Leu Pro Thr Leu Gln  
 325 330 335  
 Pro Ala Val Phe Pro Pro Ser Phe Arg Glu Leu Pro Pro Pro Pro Leu

340 345 350  
 Glu Leu Phe Asp Leu Asp Glu Thr Phe Ser Ser Glu Lys Ala Arg Leu  
 355 360 365  
 Ala Gln Ile Thr Asn Lys Cys Thr Glu Glu Asp Leu Glu Phe Tyr Val  
 370 375 380  
 Arg Lys Cys Gly Asp Ile Leu Gly Val Thr Ser Lys Leu Pro Lys Asp  
 385 390 395 400  
 Gln Gln Asp Ala Lys His Ile Leu Glu His Val Phe Phe Gln Val Val  
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 Glu Phe Lys Lys Leu Asn Gln Glu His Asp Ile Asp Thr Ser Glu Thr  
 420 425 430  
 Ala Phe Gln Asn Asn Phe  
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<210> 4807  
 <211> 1177  
 <212> DNA  
 <213> Homo sapiens

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 420  
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 1020



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<210> 4808  
 <211> 313  
 <212> PRT  
 <213> Homo sapiens

<400> 4808  
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 35 40 45  
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 50 55 60  
 Ser Ser Gln Glu Ser Glu Val Arg Ser Leu Phe Glu Gln Val Asp Arg  
 65 70 75 80  
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 85 90 95  
 Val Gln Thr Ile Leu Asn Thr Arg Asn Lys Ala Phe Trp Glu Thr Pro  
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 Ala Ser Met Trp Asp Asp Ile Asn Asn Val Gly Leu Arg Gly His Tyr  
 115 120 125  
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 130 135 140  
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 165 170 175  
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 180 185 190  
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 195 200 205  
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 210 215 220  
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 225 230 235 240  
 Thr Asp Pro Asn Ile Leu Ser Leu Ser Gly Lys Val Leu Pro Ser Cys  
 245 250 255  
 Asp Leu Ala Arg Arg Tyr Gly Leu Arg Asp Val Asp Gly Arg Pro Val  
 260 265 270  
 Gln Asp Tyr Leu Ser Leu Ser Ser Val Leu Ser His Val Ser Gly Leu  
 275 280 285  
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<210> 4809  
 <211> 999  
 <212> DNA  
 <213> Homo sapiens

<400> 4809  
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<210> 4810  
 <211> 120  
 <212> PRT  
 <213> Homo sapiens

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 35 40 45  
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Trp Pro Gly Pro Gly Tyr Phe Pro Asp Leu Thr Ser Pro Thr Ala Gln					
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Pro Leu Gln Leu Leu Gly Ala Leu His Gly Cys Ser Phe Pro Pro Pro					
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Leu Pro Ser Gly Gln Pro Cys Pro					
	115		120		

&lt;210&gt; 4811

&lt;211&gt; 3207

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4811

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&lt;210&gt; 4812

&lt;211&gt; 306

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4812

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			20					25					30		
Lys	Val	Thr	Leu	Pro	Asn	Tyr	Asp	Asn	Val	Pro	Gly	Asn	Leu	Met	Leu
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Ser	Ala	Leu	Gly	Leu	Arg	Leu	Gly	Asp	Arg	Val	Leu	Leu	Asp	Gly	Gln
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Lys	Thr	Gly	Thr	Leu	Arg	Phe	Cys	Gly	Thr	Thr	Glu	Phe	Ala	Ser	Gly
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Ser	Trp	Val	Gly	Val	Glu	Leu	Asp	Glu	Pro	Glu	Gly	Lys	Asn	Asp	Gly
			85					90					95		
Ser	Val	Gly	Gly	Val	Arg	Tyr	Phe	Ile	Cys	Pro	Pro	Lys	Gln	Gly	Leu
			100					105					110		
Phe	Ala	Ser	Val	Ser	Lys	Ile	Ser	Lys	Ala	Val	Asp	Ala	Pro	Pro	Ser
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Ser	Val	Thr	Ser	Thr	Pro	Gly	Pro	Pro	Arg	Met	Asp	Phe	Ser	Arg	Val
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Thr	Gly	Lys	Gly	Arg	Arg	Glu	His	Lys	Gly	Lys	Lys	Lys	Thr	Pro	Ser
145					150					155				160	
Ser	Pro	Ser	Leu	Gly	Ser	Leu	Gln	Gln	Arg	Asp	Gly	Ala	Lys	Ala	Glu
			165					170					175		
Val	Gly	Asp	Gln	Val	Leu	Val	Ala	Gly	Gln	Lys	Gln	Gly	Ile	Val	Arg
			180					185					190		
Phe	Tyr	Gly	Lys	Thr	Asp	Phe	Ala	Pro	Gly	Tyr	Trp	Tyr	Gly	Ile	Glu
	195						200					205			
Leu	Asp	Gln	Pro	Thr	Gly	Lys	His	Asp	Gly	Ser	Val	Phe	Gly	Val	Arg
	210					215					220				
Tyr	Phe	Thr	Cys	Pro	Pro	Arg	His	Gly	Val	Phe	Ala	Pro	Ala	Ser	Arg
225					230					235				240	
Ile	Gln	Arg	Ile	Gly	Gly	Ser	Thr	Asp	Ser	Pro	Gly	Asp	Ser	Val	Gly

245 250 255  
 Ala Lys Lys Val His Gln Val Thr Met Thr Gln Pro Lys Arg Thr Phe  
 260 265 270  
 Thr Thr Val Arg Thr Pro Lys Asp Ile Ala Ser Glu Asn Ser Ile Ser  
 275 280 285  
 Arg Leu Leu Phe Cys Cys Trp Phe Pro Trp Met Leu Arg Ala Glu Met  
 290 295 300  
 Gln Ser  
 305

<210> 4813  
 <211> 400  
 <212> DNA  
 <213> Homo sapiens

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<210> 4814  
 <211> 125  
 <212> PRT  
 <213> Homo sapiens

<400> 4814  
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 Ser Pro Trp Lys Phe Leu Arg Glu Cys Ser Asn Leu Cys Leu Thr Ile  
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 Met Met Val Val Ser Trp Thr Ala Gly Gly Lys Ala Lys Pro Cys Gly  
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 Arg Gly Gly Gly Leu Gln Arg Lys Ala Ala Ala Thr Thr Ala Ser Phe  
 65 70 75 80  
 Pro Thr His Ser His Trp Gln Thr Gly Gly Gln Val Gln Ser Pro Lys  
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 Glu Thr Ala Ala Cys Ala Gly His Pro Pro Gly Thr Ala Phe Ser Leu  
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<210> 4815  
 <211> 528  
 <212> DNA  
 <213> Homo sapiens

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 <211> 105  
 <212> PRT  
 <213> Homo sapiens

<400> 4816  
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 Pro Ile Thr Lys Pro Thr Ser Pro Ala Pro Ala Ala Gln Ser Thr Asn  
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 Gly Thr His Ala Ser Tyr Gly Pro Phe Tyr Leu Glu Tyr Ser Leu Leu  
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 Ala Glu Phe Thr Leu Val Val Lys Gln Lys Leu Pro Gly Val Tyr Val  
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 Gln Pro Ser Tyr Arg Ser Ala Leu Met  
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<210> 4817  
 <211> 1106  
 <212> DNA  
 <213> Homo sapiens

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&lt;210&gt; 4818

&lt;211&gt; 135

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4818

Met	Ala	Glu	Lys	Phe	Asp	His	Leu	Glu	Glu	His	Leu	Glu	Lys	Phe	Val
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Glu	Asn	Ile	Arg	Gln	Leu	Gly	Ile	Ile	Val	Ser	Asp	Phe	Gln	Pro	Ser
			20					25					30		
Ser	Gln	Ala	Gly	Leu	Asn	Gln	Lys	Leu	Asn	Phe	Ile	Val	Thr	Gly	Leu
		35					40				45				
Gln	Asp	Ile	Asp	Lys	Cys	Arg	Gln	Gln	Leu	His	Asp	Ile	Thr	Val	Pro
	50				55					60					
Leu	Glu	Val	Phe	Glu	Tyr	Ile	Asp	Gln	Gly	Arg	Asn	Pro	Gln	Leu	Tyr
65				70				75					80		
Thr	Lys	Glu	Cys	Leu	Glu	Arg	Ala	Leu	Ala	Lys	Asn	Glu	Gln	Val	Lys



				85					90					95					
Gly	Lys	Ile	Asp	Thr	Met	Lys	Lys	Phe	Lys	Ser	Leu	Leu	Ile	Gln	Glu				
			100					105					110						
Leu	Ser	Lys	Val	Phe	Pro	Glu	Asp	Met	Ala	Lys	Tyr	Arg	Ser	Ile	Arg				
		115					120					125							
Gly	Glu	Asp	His	Pro	Pro	Ser													
	130					135													

&lt;210&gt; 4819

&lt;211&gt; 1655

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4819

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 720  
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 1655

&lt;210&gt; 4820

&lt;211&gt; 551

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4820

Arg	Pro	Arg	Pro	Gly	Leu	Arg	Gly	Gly	Arg	Ala	Pro	Cys	Glu	Val	Thr
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Met	Glu	Ala	Gly	Gly	Leu	Pro	Leu	Glu	Leu	Trp	Arg	Met	Ile	Leu	Ala
			20					25					30		
Tyr	Leu	His	Leu	Pro	Asp	Leu	Gly	Arg	Cys	Ser	Leu	Val	Cys	Arg	Ala
		35					40					45			
Trp	Tyr	Glu	Leu	Ile	Leu	Ser	Leu	Asp	Ser	Thr	Arg	Trp	Arg	Gln	Leu
	50					55					60				
Cys	Leu	Gly	Cys	Thr	Glu	Cys	Arg	His	Pro	Asn	Trp	Pro	Asn	Gln	Pro
65					70					75				80	
Asp	Val	Glu	Pro	Glu	Ser	Trp	Arg	Glu	Ala	Phe	Lys	Gln	His	Tyr	Leu
			85						90					95	
Ala	Ser	Lys	Thr	Trp	Thr	Lys	Asn	Ala	Leu	Asp	Leu	Glu	Ser	Ser	Ile
			100					105					110		
Cys	Phe	Ser	Leu	Phe	Arg	Arg	Arg	Arg	Glu	Arg	Arg	Thr	Leu	Ser	Val
		115					120					125			
Gly	Pro	Gly	Arg	Glu	Phe	Asp	Ser	Leu	Gly	Ser	Ala	Leu	Ala	Met	Ala
	130					135					140				
Ser	Leu	Tyr	Asp	Arg	Ile	Val	Leu	Phe	Pro	Gly	Val	Tyr	Glu	Glu	Gln
145					150					155					160
Gly	Glu	Ile	Ile	Leu	Lys	Val	Pro	Val	Glu	Ile	Val	Gly	Gln	Gly	Lys
			165						170					175	
Leu	Gly	Glu	Val	Ala	Leu	Leu	Ala	Ser	Ile	Asp	Gln	His	Cys	Ser	Thr
			180					185					190		
Thr	Arg	Leu	Cys	Asn	Leu	Val	Phe	Thr	Pro	Ala	Trp	Phe	Ser	Pro	Ile
		195					200					205			
Met	Tyr	Lys	Thr	Thr	Ser	Gly	His	Val	Gln	Phe	Asp	Asn	Cys	Asn	Phe
	210					215					220				
Glu	Asn	Gly	His	Ile	Gln	Val	His	Gly	Pro	Gly	Thr	Cys	Gln	Val	Lys
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Phe	Cys	Thr	Phe	Lys	Asn	Thr	His	Ile	Phe	Leu	His	Asn	Val	Pro	Leu

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<210> 4821
<211> 585
<212> DNA
<213> Homo sapiens
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120
agagaactgg gggagctgct gggcgaagca cgctactacc tggtgcaggg cctgattgag
180
gactgccagc tggcgctgca gcaaaaaagg gagacgctgt ccccgctgtg cctcatcccc
240
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atggtgacat ctccccggga ggagcagcag ctcttgcca gcacctcaa gcccggtggtg  
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aagctcctgc acaaccgcag taacaacaag tactcctaca ccagcacttc agatgacaac  
360  
ctacttaaga acatcgagct gtctgacaag ctggccctgc gcttccacgg gcggctactc  
420  
ttcctcaagg atgtcctggg ggacgagatc tgctgctggt ctttctacgg gcagggccgc  
480  
aaaatcgccg aggtgtgctg cacctccatt gtctatgcta cggagaagaa gcagaccaag  
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585

<210> 4822  
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<212> PRT  
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<400> 4822  
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20 25 30  
Ser Val Pro Leu Pro Glu Ser Thr Arg Glu Leu Gly Glu Leu Leu Gly  
35 40 45  
Glu Ala Arg Tyr Tyr Leu Val Gln Gly Leu Ile Glu Asp Cys Gln Leu  
50 55 60  
Ala Leu Gln Gln Lys Arg Glu Thr Leu Ser Pro Leu Cys Leu Ile Pro  
65 70 75 80  
Met Val Thr Ser Pro Arg Glu Glu Gln Gln Leu Leu Ala Ser Thr Ser  
85 90 95  
Lys Pro Val Val Lys Leu Leu His Asn Arg Ser Asn Asn Lys Tyr Ser  
100 105 110  
Tyr Thr Ser Thr Ser Asp Asp Asn Leu Leu Lys Asn Ile Glu Leu Phe  
115 120 125  
Asp Lys Leu Ala Leu Arg Phe His Gly Arg Leu Leu Phe Leu Lys Asp  
130 135 140  
Val Leu Gly Asp Glu Ile Cys Cys Trp Ser Phe Tyr Gly Gln Gly Arg  
145 150 155 160  
Lys Ile Ala Glu Val Cys Cys Thr Ser Ile Val Tyr Ala Thr Glu Lys  
165 170 175  
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180 185 190  
Gly Gly His  
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<210> 4823  
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<212> DNA  
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120  
ttaaaggaaa aatctacagg aagtaagaag gccaatagat ttcaccccta ttcaaaagac  
180  
aagaattcgg gcactggaga aaagaagggt ccaaatacgta acagagtttt cattagcaac  
240  
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360  
gaattcaaag atgaagaatt tgtaaagaaa gccctagaaa ctatgaacaa atatgatctt  
420  
agtggaagac cccttaatat taaagaggat cctgatggag aaaatgctcg tagggcattg  
480  
cagcgaacag gaggatcatt tccaggagga cacgtccctg atatgggatc agggttgatg  
540  
aatttaccac cttccatact caataatcca aacattcctc ctgaagtcac cagtaatttg  
600  
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1380  
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1440  
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gtcagaaatc taccttttga cttgacttgg cagaaactaa aagagaaatt cagtcagtgt  
1560  
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1620  
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1680